Managing the Nation's Public Lands

Fiscal Year 1990

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Department of the Interior Mission Statement

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources protection of fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.

Bureau of Land Management Mission Statement

The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times. Management is based on the principles of multiple use and sustained yield of our Nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation; rangelands; timber; minerals; watershed; fish and wildlife; wilderness; air; and scenic, scientific, and cultural values.

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Fiscal Year 1990

This report to the Congress of the United States on the management of the Nation's public lands is submitted pursuant to requirements of the Federal Land Policy and Management Act of 1976 (FLPMA) and covers the period from October 1, 1989 through September 30, 1990.

U. S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

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Introduction

HISTORICAL PERSPECTIVE

In the last half of the 18th century and the first half of the 19th century, the United States government acquired most of the land west of the Appalachian Mountains, eventually owning more than 1.5 billion acres of public domain land (or public land) that had never been in private ownership. Although the Federal Government has since titled most of this acreage to private citizens, industry, and State and local governments, some of the public lands were dedicated to establish the national parks, national forests, national wildlife refuges, military compounds, and other government facilities. However, approximately 270 million acres — about one-eighth of the Nation — remain today as public lands managed by the Bureau of Land Management (BLM) for multiple uses. In addition, the BLM manages the mineral estate underlying another 300 million acres of land administered or owned by other agencies or private interests. Most of this acreage is located in theWestern States, including Alaska, although small parcels are scattered across the Eastern States.

In 1812, Congress established the General Land Office to administer the public lands, with the primary purpose of passing public lands into private ownership. The passage of the Taylor Grazing Act in 1934 and establishment of the U.S. Grazing Service provided for active range management on the public lands, but this was seen as interim management of the land pending its final disposal into non-Federal ownership.

In 1946, the Presidential Reorganization Plan No. 2 merged the Grazing Service with the General Land Office to create the BLM within the Department of the Interior. The BLM became responsible for managing all the resources on the Nation's public lands. However, with more than 2,000 unrelated and often conflicting laws pertaining to the public lands, the agency had no unified legislative authority to manage those lands.

Historic remains are often found on BLM lands. Here, BLM and University of Arizona archaeologists and paleontologists excavate a 13,000-year-old mammoth tusk found at Murray Springs in the San Pedro Riparian National Conservation Area.

THE FEDERAL LAND POLICY AND MANAGEMENT ACT

When Congress enacted the Federal Land Policy and Management Act of 1976, (FLPMA), 43 U.S.C. 1701 et seq, it established a coherent legislative mandate for managing the public lands and made the BLM a true multiple-use agency. The law recognized that public land is a national asset, providing goods, services, and vast natural resources for millions of Americans:

...Congress declares that it is the policy of the United States that
.....the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands...
.....the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use...
(FLPMA, Section 102[a][12] and 102[a][8]

AMERICA'S RESOURCES

FLPMA provides a clear-cut policy that most public lands are to be retained in Federal ownership and managed by the BLM under a concept of multiple use for all Americans, with full participation of the public and a careful balancing of the interests of competing users. Today the BLM manages a multitude of assets for the American public. They include:

- about 1.4 billion barrels of proven oil reserves;
- approximately 12.5 trillion cubic feet of proven natural gas reserves;
- 10 million animal-unit months of forage to support about 4.3 million head of domestic livestock;
- the major portion of the undiscovered but geologically predictable domestic deposits of aluminum, antimony, beryllium, bismuth, cadmium, chromium, cobalt, copper, fluospar, lead, manganese, mercury, molybdenum, nickle, platinum group metals, silver, tungsten, and vanadium;
- almost 8 million acres of commercial forest land with a producing capacity of about 1.4 billion board feet each year;
- about 80 percent of the Nation's oil shale;
- more than 448 designated areas of critical environmental concern;
- all 11 of the Nation's major tar sand sites;
- thousands of unique recreational areas, including 32 Wild and Scenic Rivers, 22 National Trails, 673 developed and semi-developed recreation sites, 1,749 day-use units and 5,552 family camping units, 65,000 miles of roads suitable for

BLM management is based on the principle of multiple use for all Americans.

recreation travel by normal vehicle, 4.2 million acres of lakes and reservoirs, and thousands of areas open to a wide variety of recreational uses;

- about one-third of the Nation's coal supply;
- more than 1.5 million acres of designated wilderness in 66 areas and more than 25 million acres under study for possible designation;
- some 35 percent of the Nation's uranium reserves;
- 186 archaeological and historical listings in the National Register of Historic Places comprising more than 3,000 historical and archaeological properties that have nationally significant values;
- world class deposits of phosphate, sodium, lead, zinc, and potash;
- habitat for one out of every five big game animals in the United States, including many caribou, brown and grizzly bears, desert bighorn sheep, moose, mule deer, and antelope;
- nearly 85,000 miles of streams containing trout, salmon, and other sport fish — enough to encircle the earth three and one-half times;
- prospective sources of geothermal energy on more than 55 million acres, plus 2 million acres of known geothermal resource areas; and
- prospective sources of oil and gas on an undetermined portion of the 570 million acres of mineral estate.
- approximately 96 percent of all wild horses and burros managed, protected, and controlled under the Wild Free-Roaming Horse and Burro Act of 1971.

MULTIPLE-USE MANAGEMENT

The BLM manages the Nation's public lands to meet the needs and desires of the American public. The magnitude and value of these resources frequently lead to conflicting demands and uses for the public lands. The FLPMA mandate for multiple-use management is the BLM's most powerful tool for reconciling the differences of opinion about how public lands are to be managed. Multiple use provides for the development of needed resources, while protecting other resource values from inadvertent damage or destruction. Through a planning, decision making, and management process that balances alternative uses and involves the public at all steps, the BLM can provide opportunities for many different uses of the public lands and ensure that its many resources will remain available in the future.

Most of the BLM's 10,000 employees work in field offices. Here, BLM ranger Rob Smith gives Boy Scouts a lesson in resource protection and safety at Arizona's Havasu Resource Area.

American citizens can play a critical role in public land management — today and into the future. How Americans deal with the public lands today and tomorrow will determine what this land will offer on BLM's 50th, 80th and 100th birthdays. The BLM encourages all citizens to learn more about its public lands, to become involved in its management, and to enjoy the opportunities afforded by multiple-use management.

ORGANIZATIONAL STRUCTURE

The BLM's National Office is in Washington, D.C. In addition, there are 12 State Offices, 58 District Offices, and 140 Resource Area Offices. The BLM has about 10,000 employees, most of whom work in field offices in the West. Multiple-use management requires many skills and talents. Foresters, range conservationists, wildlife biologists, archaeologists, and many other disciplines are needed to care for and manage the public lands.

The following pages provide an overview of public land management during Fiscal Year (FY) 1990. Additional information about the BLM and the public lands is available from BLM headquarters or State or local offices.

RENEWABLE RESOURCES PROGRAMS

FISH AND WILDLIFE HABITAT

Fish and wildlife habitat on BLM-administered land provides homes for more than 3,000 species of mammals, birds, reptiles, fish and amphibians. No single Federal or State agency manages more fish and wildlife habitat than the BLM. Cooperation between State and other Federal agencies that have primary responsibility for wildlife and fisheries population management is essential to the success of the BLM's program.

Fish and Wildlife 2000

FY 1990 marked the third year of execution of *Fish and Wildlife 2000*, the BLM's strategic plan for fish and wildlife resource management on the public lands. This plan is bringing a clearer focus to the direction and management of the BLM's wildlife and fisheries program. State-level "Fish and Wildlife 2000" plans were completed this year. These plans provide a blueprint for the BLM's State-level programs and on-the-ground implementation.

Partnerships

Continued emphasis on the development of partnerships with various organizations has resulted in increased investments from conservation groups and other private interests. This also has enabled the BLM to better capitalize on the Challenge Cost Share funds made available from Congress. In FY 1990, a $2 million Challenge Cost Share appropriation was matched by $2.5 million in outside funds, labor and materials. These funds were used for on-the-ground habitat projects, studies and inventory.

Considerable efforts have been made to develop partnerships with other diverse associations. National Memorandums of Understanding have been completed with the following

Riparian areas provide habitat for a variety of wildlife species. Here, members of a statewide assessment team check the water level of a riparian area in Arizona.

organizations:

- Center for Plant Conservation
- Ducks Unlimited
- Foundation for North American Sheep
- Mule Deer Foundation
- National Rifle Association
- National Wild Turkey Federation
- Pheasants Forever
- Quail Unlimited
- Rocky Mountain Elk Foundation
- The Nature Conservancy
- Times-Mirror Magazines Conservation Council
- Trout Unlimited

Threatened and Endangered Species

Desert Tortoise Habitat Management — Emphasis continued to be placed on implementing a rangewide management plan for desert tortoise habitat in the four-state area of California, Nevada, Utah and Arizona. The management oversight group called for in the rangewide plan is providing key oversight and a positive forum for interstate coordination.

Threatened and Endangered Fisheries Habitat Management — Currently about 100 species of fish Federally-listed as threatened or endangered or as candidate species can be found on BLM land. An interdisciplinary team completed a strategy plan for managing these species.

Special Status Plants — About 45 threatened or endangered plants and 650 candidate plant species are found on BLM land. Management of these species poses significant challenges. In FY 1990, an interdisciplinary team continued efforts to formulate strategies for implementing the *Fish and Wildlife 2000* objectives as they relate to plants.

Wildlife

Waterfowl Habitat — BLM land contains 16.2 million acres of wetland and waterfowl habitat. In FY 1990, implementation of the waterfowl strategy plan continued with special focus on joint venture areas in the prairie pothole areas of North Dakota and Montana, the Central Valley of California and in Alaska under the North American Waterfowl Management Plan. The BLM received funding under the North American Wetlands Conservation Act for wetland restoration efforts for the Warner Wetland in Oregon and the Thousand Springs area in Idaho.

A Raptor Habitat Strategy Plan is part of BLM's Fish and Wildlife 2000 program.

Desert Bighorn Sheep Rangewide Plan — The BLM manages 80 percent of the 9.9 million acres of desert bighorn habitat in this country. Major strides have been made in implementation of the rangewide plan in cooperation with state wildlife agencies and bighorn sheep conservation groups. In FY 1990, the BLM, in cooperation with State wildlife agencies, participated in release and monitoring of bighorns into four new habitat areas. Of the 115 habitat areas targeted for restoration efforts, 96 areas are occupied by sheep.

Watchable Wildlife — Watchable Wildlife is a joint wildlife and recreation initiative in cooperation with other Federal and State agencies and organizations. In FY 1990, the BLM was a major participant in the development of State viewing guides for Montana, Idaho, and Utah. Along with other partners, the BLM continues to develop education and interpretive materials for the 60 wildlife viewing areas on public lands.

Upland Game Bird Habitat — A BLM strategy team identified approximately 230 million acres of upland game bird habitat for 23 species. Specific strategies for the conservation and management of these upland game bird species have been developed to guide long-term management of the habitat. The team recommended that special emphasis be placed on birds with declining populations, such as Columbian sharptail grouse, sage grouse, Gould's wild turkey, and mountain quail. In FY 1990, two Columbian sharptail grouse transplants were conducted in cooperation with the Oregon Department of Fish and Wildlife, and a mountain quail habitat suitability study in cooperation with Idaho Fish and Game was completed.

Raptors — The Raptor Habitat Strategy Plan implementation was initiated in FY 1990. The BLM manages 13.5 million acres of habitat that encompass 223 key raptor areas, important to the 24 species of eagles, hawks and falcons found on public lands. In FY 1990, the BLM continued to implement a diverse raptor habitat management program that ranged from peregrine falcon introduction programs in Colorado and Wyoming to winter bald eagle surveys in Idaho, to breeding surveys for the Mexican spotted owl in Nevada, Colorado and Arizona. A variety of research efforts were continued, including the multi-year research project with the National Guard for the Orchard Training Center in Idaho's Snake River Birds of Prey Area and the Northern spotted owl research and monitoring efforts in California and Oregon.

Big Game — An interdisciplinary team of BLM biologists and managers, along with representatives of each Western State wildlife agency and several conservation groups, is developing a strategy plan for managing various species of big game on BLM lands. This plan will be completed in FY 1992.

Fisheries

Anadromous Fish Habitat Management — The BLM administers more than 15,000 miles of habitat in the Pacific Northwest and Alaska for salmon and steelhead. In recognition of the more than $50 million in commercial and subsistence value of these species and the additional 1.5 million recreational fishing days, continued emphasis was placed on implementing the anadromous fish strategy plan.

Anadromous Fish Plan for the Columbia and Snake River Basins — An increasing concern has been shown for declining populations of salmon and steelhead in the Columbia and Snake River basins. Several populations have been proposed for addition to the list of endangered and threatened species. As part of the Pacific Northwest Salmon Summit, the BLM completed a 1990 strategy plan for management of these recreationally and commercially vital species to the Pacific Northwest and the Nation. The plan presents BLM proposed actions in Idaho, Oregon and Washington, where the BLM manages salmon habitat in the Willamette, Grande Ronde, Deschutes, John Day, Walla Walla, Salmon, Snake, and Clearwater Rivers.

Stream improvement projects enhance fisheries habitat on BLM lands.

Fisheries Program Assessment and Strategy Plan — In FY 1990, an assessment of current fisheries programs and a series of strategies for achieving the fisheries objective in "Fish and Wildlife 2000" were approved. This plan applies to the 155,000 miles of fishable streams and 4 million acres of reservoirs managed by the BLM. Implementation efforts were initiated within budget constraints.

A BLM forestry technician uses netting to protect tree seedlings on a reforestation site. Forest land provides benefits to wildlife, watershed, recreation, and livestock forage.

Special Status Fish Management — In FY 1990, the BLM completed its first assessment and action plan for the management of special status fish and their ecosystems on public lands. The plan incorporates the needs of 37 fish species listed as threatened or endangered plus another 73 that are candidates for Federal listing, or proposed for threatened or endangered status, or are listed by state governments. Goals include the eventual recovery and delisting of 11 threatened or endangered species, reclassification of eight others from endangered to threatened, and recovery of 18 candidate species, which will prevent their need to be formally protected pursuant to the Endangered Species Act.

FORESTRY

Approximately 48 million acres of BLM-managed land is forested. Twenty-two million of these acres are located in Alaska and 26 million acres in the lower 48 States. Forest land is classified as commercial — capable of producing 20 cubic feet of wood volume per acre per year regardless of species — or as woodland. All of this forest land provides many benefits such as wildlife habitat, watershed protection, recreation, forest products and livestock forage. Forest products include sawlogs, fuelwood, posts, poles, Christmas trees and pinenuts.

The 22 million acres of forest land in Alaska consist of approximately 7 million acres of commercial forest and 15 million acres of woodland. The 26 million acres of forest land in the lower 48 States consist of 5 million acres of commercial forest land and 21 million acres of woodland. Sixty million board feet of timber are harvested annually from the lands located outside western Oregon. There are 43,000 permits issued for other forest products such as firewood, Christmas trees and posts.

Approximately half of the commercial forest land in the lower 48 States is located in western Oregon and is considered to be some of the most productive forest land in the world. In western Oregon, 1.169 billion board feet of timber were offered and sold during FY 1990 and 0.944 billion board feet of timber were harvested. The 1990 sale offering level exceeded that mandated by Congress in the FY 1990 Interior Appropriations Act by 0.014 billion board feet. Receipts from the harvest approximated $225 million.

On July 23, 1990, the decision by the U.S. Fish and Wildlife Service (FWS) to list the northern spotted owl as threatened under the Endangered Species Act went into effect. On April 4, 1990, the Interagency Scientific Committee (ISC) released its report entitled, "A Conservation Strategy for the Northern Spotted Owl." This report proposed a conservation strategy for the owl that recommended the land managing agencies eliminate timber harvest in tracts of forest lands called Habitat Conservation Areas (HCA's).

The BLM Director has cited the ISC Report as a benchmark for the development of a management plan, but has also emphasized the BLM's requirement under the National Environmental Policy Act to analyze other alternatives during the preparation of resource management plans (RMP's). The RMP's for the BLM Western Oregon districts are scheduled for completion to permit implementation in late 1992 or early 1993. During 1991 and 1992, the BLM will

prepare for offering approximately 750 million board feet per year. The actual level of offering will be at the highest level possible consistent with FWS consultations and the proposed recovery plan. This strategy is designed to minimize economic impacts, protect northern spotted owl populations, and still provide for a range of management options for consideration in the development of the new RMP's.

"FORESTS: Our Growing Legacy"

A forest management outreach effort was initiated in early 1990 to expand the scope of the existing forestry program, emphasizing total forest/woodland management. This strategy is a response to the public's desire to broaden and emphasize the non-commodity side of forest management, such as recreation, wildlife habitat, and riparian areas. The goal is to plan into the next century, and to incorporate an ecosystem approach to long-term management of forests. A status report on this program is scheduled for publication in July, 1991.

RANGELAND RESOURCES

Range Management

Since passage of the Federal Land Policy and Management Act (FLPMA), the focus of the range management program has been expanded to reflect consideration of all uses of public rangelands.

Healthy range vegetation is the key component of upland and riparian rangeland ecosystems. The principal emphasis of the range management program is on the proper, integrated management of these riparian and upland ranges to protect and improve rangeland resources for all multiple uses, including management of livestock grazing. Sound land use planning, done in coordination, consultation, and cooperation with range users, interest groups, and other interested parties at both the national and local levels, provides the basis for development of resource management objectives.

Following completion of land use planning and preparation of environmental impact statements (EIS's), the resulting decisions are implemented through preparation of allotment management plans or coordinated activity plans. These plans identify grazing management prescriptions and other on-the-ground activities needed to achieve site-specific vegetation and other resource management objectives. The BLM prepared 147 grazing activity plans during FY 1990.

The emphasis of the program has shifted from preparation of grazing EIS's to the integrated management of rangelands. During FY 1990, the BLM issued a *Range of Our Vision* strategy document which has been incorporated into the President's *America the Beautiful* initiative for enhanced stewardship of public lands. This strategy identifies three principal goals to be achieved by the year 2009 or earlier, setting the stage for a rangeland management program into the 21st century. These goals, which address the improved ecological condition and functioning of range ecosystems, are based on the determination of "desired plant communities" using land capability analysis and reflecting multiple use management objectives to eventually manage and monitor all rangeland sites and areas.

These goals will be accomplished through the gradual completion of ecological site inventories for all public lands, development of allotment management or coordinated activity plans that include proper vegetation use and grazing prescriptions, installation of needed range improvements, and monitoring to determine if management objectives are being achieved. The full realization of these goals will require the ongoing commitment of all users, interested members of the public, BLM personnel, and Congress. This is being achieved, in part, by documenting the benefits that can be realized and by informing and motivating others through the identification of successes. The growing support of the livestock industry for riparian area improvement is one example of how an awareness of benefits motivates affected interests.

In FY 1990, about 3.3 million acres were inventoried using the ecological site inventory method. The information provides the foundation for land use plan objectives based on realistic capability analyses, and provides the basis for management prescription and for detecting changes in resource condition through monitoring studies. Rangeland monitoring continues to

be among the BLM's top priorities. At the end of FY 1990, there were 10,862 allotments with established monitoring systems. A workshop was held in Sacramento in December 1989 for field office monitoring coordinators to further refine monitoring policy and procedure and to ensure that effective monitoring activity will encompass all rangeland resources.

Range improvements continue to be an important part of the range management program. During FY 1990, range improvements included development of 653 water facilities, construction of 694 miles of fencing, development of 142 management facilities, treatment of 76,770 acres of vegetation, and maintenance of 290 improvement projects. The BLM and Forest Service continue to actively support the Experimental Stewardship Program (ESP), as authorized by the Public Rangelands Improvement Act of 1978. The purpose of the ESP is to foster innovation, cooperation, and better range stewardship, ultimately leading to the improved condition of public lands. During FY 1990, the Eighth National Stewardship Conference was held in Reno, Nevada. The ESP continues to improve communication and cooperation between private range users and the BLM and Forest Service personnel and to increase pride in, and commitment to, the stewardship of public lands.

The BLM remains committed to implementation of the 1987 Memorandum of Understanding (MOU) with Department of Agriculture agencies for coordinated resource management. The MOU facilitates coordination of resource planning, management, and educational activities with state and local agencies, private landowners, and other interested public entities for development of sound resource management and conservation practices. Coordinated resource management is particularly suited to situations where differing opinions and multiple use values require a participatory approach to conflict resolution through identification of win-win solutions.

A grazing fee, determined by a formula consisting of a base value, adjusted by indices reflecting current year land lease rates, production costs, and the price of beef cattle, is charged for grazing livestock on public lands. Annual increases or decreases in fees are limited to no more than a 25 percent change from the previous year's fees. A minimum fee of $1.35 per animal unit month (AUM) has been established. An AUM is the amount of forage consumed by one cow and one calf, one horse, or five sheep or goats in one month. In FY 1990 the fee was $1.81 per AUM.

About 18,900 livestock operators used lands administered by the BLM to supply part of the annual forage needed by domestic livestock in FY 1990. Approximately 10.4 million AUM's were licensed in FY 1990.

Water samples are taken to assess management strategies for water quality improvement.

SOIL, WATER, AND AIR MANAGEMENT

The consideration of soil, water, and air is basic to meeting many of the multiple-use objectives of the BLM. Through the assessment and inventory of soil, water, and air resources, information is provided for multiple-use planning and management. The soil, water, and air program also achieves objectives specific to water and air quality, watershed improvement, and riparian-wetland area enhancement.

Soil Surveys

During FY 1990, over 2.8 million acres of soil survey were completed. A review of soil surveys on public lands was completed and approximately 87 million acres have been surveyed. The BLM has mapped soil on 52 percent of the land it manages and continues toward the goal of soil mapping all public lands.

Water Rights

The BLM is participating in basin wide rights adjudications in the Gila, Snake, and Rio Chama Rivers, and in the Delta and Gulkana Rivers in Alaska. Also, progress is being made toward meeting the overall goal of quantifying all existing water uses to facilitate water right claims on public lands. During FY 1990, nearly 8,700 water sources were added to data bases used for recording water right filings with the States. Some of the water right filings were made in response to State river basin adjudications while others were made to the States on BLM's initiative. Efforts to assess instream flow requirements continue. Acquiring water rights is vital to the successful management of the public lands.

During FY 1990, 325 watershed improvements were completed. These improvements reduced erosion and sediment yields, improved water quality, stabilized stream banks and channels, reduced salinity, recharged ground water, and increased water quantity. Maintenance of existing improvements continues as an ongoing effort, with 175 projects being completed in FY 1990. Over 2,600 watershed stations were monitored to assess progress toward meeting soil and water management objectives.

Salinity Control

Progress continues to be made in implementing the actions outlined in the report to Congress titled *Salinity Control on BLM-Administered Public Lands in the Colorado River Basin.* The report outlines a comprehensive program for minimizing salt contributions from public lands to the Colorado River. Watershed management plans were developed in nine watersheds to implement management prescriptions and practices to control salinity problems. In FY 1990, an estimated 9,800 tons of salt were prevented from reaching the Colorado River through salinity control project construction and maintenance activities. In addition to the nine watershed management plans prepared in the salinity areas, 24 were prepared in other watershed areas to address nonpoint source problems, riparian-wetland area needs, and watershed problems of general concern. Substantial work was also completed with the States in coordination and preparation of water quality management plans prepared pursuant to Section 319 of the Water Quality Act.

Global Change

In FY 1990, the BLM initiated development of a Global Change Research Program (GCRP) which will be part of the U.S. GCRP. Objectives of the program are (1) to conduct research on the causes and effects of global change, primarily as related to the natural resources managed by the BLM; and (2) to work cooperatively with other Federal agencies, educational institutions, etc., to support and stimulate research in this area. Global change activities in FY 1990 focused primarily on the planning, coordination, and field preparation for implementation of BLM's GCRP. Research and monitoring plans for six projects were completed along with scientific peer review. Coordination activities with other Department of the Interior agencies (National Park Service, Geological Survey, Fish and Wildlife Service, and Bureau of Reclamation) were initiated at the headquarters and field offices. Several ongoing BLM research projects such as intermountain wilderness monitoring are closely aligned with the research needs of the U.S. GCRP and will be expanded to become key components of the BLM effort.

Air Resources

The air resource program supports the operation of more than 28 Remote Area Weather Stations and other climate stations to provide site-specific climate information for use in a wide variety of management activities. BLM's air modeling supports a wide variety of bureau activities including energy and mineral leasing, smoke management for prescribed burning, wilderness management, and resource management planning. Air modeling is used to help

assure compliance with Environmental Protection Agency and State air quality standards and regulations.

The BLM's air resource program continues to play a key monitoring role in the National Acid Precipitation Assessment by operating 15 acid rain monitoring stations at remote locations in nine Western States. In FY 1990, the BLM continued operation of two dry deposition (aerosols, gases) monitoring sites co-located with acid rain stations in Idaho and Wyoming. These stations are part of the Environmental Protection Agency's National Dry Deposition Network which established 10 stations in the West in FY 1988. They provide data essential for the development of acid precipitation maps used to determine trends and possible impacts of acidic deposition in the western United States.

David Krueper, BLM wildlife biologist, documents different bird species along the San Pedro Riparian National Conservation Area in Arizona.

PEST CONTROL

Weeds

The BLM participates in cooperative programs with States and counties for the control of noxious weeds on public lands. Strategies for prevention of weeds are being integrated with control measures. Approximately 65,000 acres were treated for noxious weeds in FY 1990, with more than 30,000 acres being managed by alternative means such as introduction of predaceous insects. The BLM is participating with other agencies in integrated pest management (weed) research.

Grasshoppers

The BLM periodically, in cooperation with the Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), initiates action needed to control grasshoppers and other insects on public lands. APHIS applies control treatments when the levels of infestations reach epidemic levels. The BLM, in cooperation with APHIS, is sponsoring research to develop alternative pest management techniques for prevention of epidemic infestations.

RIPARIAN-WETLAND AREAS

The BLM's Riparian Area Management Policy was incorporated into *Riparian-Wetland Initiatives for the 1990's*, a blueprint for managing riparian-wetlands that encompass 23.7 million acres (8.8 percent) of BLM lands. The initiative stresses a holistic watershed management approach with participation on an interdisciplinary, cooperative basis. It sets a series of goals and strategies to achieve proper functioning condition on at least 75 percent of riparian-wetland areas by 1997 and to provide a wide variety of vegetation and habitat diversity for wildlife, fish, livestock, and watershed protection. The initiative also emphasizes management of the natural recovery process prior to considering structural measures.

During FY 1990, the BLM completed a guide for classifying riparian-wetland sites using the ecological site concept. This technique was used in the inventory of 471,300 acres of riparian-wetland habitat. Each State Office produced a strategic plan to guide statewide implementation of the *Riparian-Wetland Initiative for the 1990's*. The BLM continued to restore degraded riparian-wetland areas by completing 636 improvement projects. In addition, 413 existing riparian projects were maintained by the BLM, cooperators, volunteers, and land users.

All necessary actions were initiated in FY 1990 for implementing the recommendations made in the General Accounting Office's report, *Public Rangelands, Some Riparian Areas Restored But Widespread Improvement Will Be Slow.* A special project code was developed to track expenditures, measure accomplishments, and be responsive to documenting and justifying instances where established riparian management goals are seriously thwarted or rejected. The previously mentioned state riparian management strategy goals were consolidated in the nationwide initiative to identify 174,000 miles of riparian areas to be targeted for restoration in the next 5 years.

During FY 1990, coordinated riparian management training sessions were held in Arizona, Montana, and New Mexico. Numerous public education workshops were held to increase the "riparian consciousness" among resource personnel, public land users, and the general public. Seminars were conducted in most States to improve the public understanding of the ecological requirements for the proper restoration and maintenance of healthy riparian-wetland communities.

Demonstration areas continued to be used to show the multiple benefits of improving riparian areas. Benefits include increased ground water recharge, restored perennial stream flows, increased forage and cover for wildlife and livestock, reduced flood and sediment damage and improved water quality. As a follow up to implementation of the demonstration areas with balanced stewardship and full cooperation with all interested parties, the BLM developed a special Director's Riparian Stewardship Award. The award recognizes permittees and others who are key to successful riparian area restoration and enhancement efforts. Seventeen awards were presented in FY 1990 to individuals or groups who were instrumental in fostering cooperation and partnerships in implementing the riparian-wetland initiative.

In recognition of its success in restoring riparian areas with proper livestock grazing practices, the BLM's Prineville, Oregon District received an award in April 1990 from Renew America, a nonprofit educational organization. At a reception at the Norwegian Embassy in Washington, D.C., the Prineville District also received an environmental achievement certificate for riparian enhancement from the Friends of the United Nations Environmental Program.

The BLM continues to work in partnership with youth and conservation groups, public land users, schools, State and other Federal agencies, and the general public on riparian-wetland restoration and enhancement efforts. The "Riparian Enhancement Team" concept was expanded in FY 1990 beyond the Oregon effort and now involves volunteer programs in Arizona, California, Idaho, New Mexico, Utah, and Nevada.

WILD HORSE AND BURRO PROGRAM

Since 1971, the Federal Government has protected America's wild horses and burros under the provisions of the Wild Free-Roaming Horse and Burro Act. At the end of FY 1990, close to 50,000 wild horses and burros roamed public lands administered by the BLM in 10 Western States. To maintain healthy herds of wild horses and burros as part of a thriving natural ecological balance, the Act requires the BLM to remove excess animals and place them in private care.

Wild horse and burro populations exceed the appropriate management level in most herd areas. In FY 1990, the BLM was able to remove about 4,450 wild horses and 600 wild burros. This level of removals did not offset the annual increase in total population, estimated to be between 15-20 percent. The limited removals were partially the result of delays brought about by appeals of removal decisions to the Interior Board of Land Appeals.

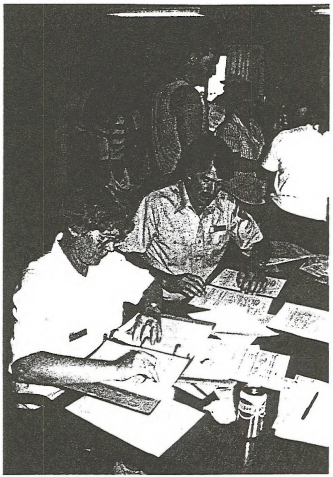
BLM's wild horse adoption program placed 4,300 animals in private care in FY 1990. Since the inception of the BLM adoption program, 100,500 wild horses and burros have been placed with individuals throughout the continental United States.

The BLM placed animals not suited for adoption on two sanctuaries, one in South Dakota and one in Oklahoma. At the end of FY 1990, the sanctuaries were caring for a total of about 3,200 older or unsound wild horses.

For the fifth year, inmates at State prisons trained wild horses, most of which were between the ages of 5 and 9, to enhance their adoptability. Four States participate in this cooperative program with the BLM: California, Colorado, New Mexico, and Wyoming. The prisons in New Mexico and Colorado also maintain younger animals for the BLM pending shipment to adoption centers.

The General Accounting Office (GAO) audited the wild horse and burro program in August 1990 and recommended improvements in three areas: removal decisions, fee waiver adoptions, and prison training. The fee waiver program was terminated in 1988, and the BLM has already remedied some of the other problems identified by the GAO. The BLM also initiated actions in FY 1990 to resolve the remaining concerns in a timely manner.

The Secretaries of the Interior and Agriculture reestablished the Wild Horse and Burro Advisory Board in FY 1990. The Board will look at a broad range of issues affecting these symbols of the Western spirit and make recommendations to the Secretaries on ways to improve the program.



Maxine Shane and John Winnepenninkx assist during a wild horse adoption at Palomino Valley Adoption Center in Nevada.

LAND PROGRAMS

Automation and maintenance of public land records is a BLM responsibility. Vonnie Kraemer, records assistant, checks records to verify the caller's estimation of deed boundaries.

LANDS AND REALTY MANAGEMENT

The Lands and Realty Program provides:

- Efficient, timely and professional lands and realty service to meet public needs/demands for use and subsequent monitoring of the public lands;
- Lands and realty service consistent with multiple-use resource management initiatives (such as *Recreation 2000* and *Fish & Wildlife 2000*);
- Lands and realty actions and services in support of otherFederal programs (such as the military);
- Assistance to the public for public land status use and information through public information rooms in field offices; and
- Automation and maintenance of public land records.

Lands and Realty Program activities include land use planning, public outreach and information needs, public and industry coordination, initiating corridor planning, managerial direction, pre-application consultation (review), and other aspects of program management not directly associated with a specific case. Casework includes land use authorizations for rights-of-way, recreation and public purposes (R &PP) leases, commercial leases, sales, and land acquisition such as exchanges. Casework includes an appraisal or assessment of fair market value for land rent, fees, sale price, or value of lands for exchange.

The Lands and Realty Program meets commitments through the coordinated management of the following major public service and resource management support functions.

Lands

This core program provides basic and fundamental BLM services to the public, State, local and other Federal agencies by processing

- Land use authorizations (R&PP leases, issuance of patents, commercial leases, permits and entries);
- Exchanges to consolidate public ownership of land resources for protection of high value areas, improving resource management, and reducing land management costs of the public lands;
- Land disposal actions such as public land sales or actions leading to a patent of public lands;

- Automation and operation of the official public lands records for the Federal Government, and response to public inquiries about public land status, use, and availability.

Highlights of recent accomplishments include adjusting ownership of over 53,000 acres of State and Federal land to enhance riparian and wildlife habitat areas in Arizona; consolidating land inholdings in the Desert Tortoise Natural Area in California; protecting over 20,000 acres by withdrawal in the scenic Ruby Canyon of Colorado; and selling over 5,500 acres of public land to Clark County, Nevada, for community expansion needs of the Las Vegas valley.

Withdrawal Processing and Review

This management support function responds to:

- All Federal agency withdrawal needs of public lands to protect valuable resources or provide for special use such as the military;
- Alaska withdrawal processing;
- Review of all existing public land withdrawals to ensure that there are no unnecessary closures to appropriate public land uses.

During FY 1990, the Secretary of the Interior approved 18 withdrawals, encompassing 57,332 acres in 7 States, to protect archaeological, geological, paleontological, recreational, and reservoir sites. Included in these withdrawals was the protection of a seed orchard and a Smithsonian Institution observatory site. Of the 57,332 acres, approximately 10,000 were withdrawn to protect irreplaceable surface resources from indiscriminate public use.

Public Land Access

This public service program provides:

- Public access to Federal lands for appropriate uses by acquiring those legal rights (easements for road and trail access) on non-Federal lands that are essential to implement planned BLM resource management programs such as timber harvest;
- Public access to areas which are designated as valuable for public recreation uses (such as special recreation areas, national hiking trails, wilderness/wilderness study areas, or wild and scenic rivers);
- Access to large blocks of public land currently unavailable to the public.

The BLM recently acquired Kid Creek in North Dakota through land exchange pooling. Here, Boy Scouts assist in improving the riparian habitat.

Access was acquired on 191 easements to public lands during the past year in support of resource programs. This includes over 100 road easements for fishing, hunting, timber harvest, and wildlife enhancement in Idaho, Montana, and Oregon. Access is gained to enhance the management of public lands and all resources.

Land and Water Conservation Fund (LWCF)

This public land enhancement and conservation program provides for:

- Acquiring non-Federal land having significant resource and public values;
- Acquiring interest on non-Federal land;
- Consolidating public land ownership patterns to provide optimum protection and management of critical ecosystems that provide irreplaceable resources which have national significance.

LWCF adjustments are primarily accomplished by exchanging public lands having development potential for private land containing significant resource value, and which

- Carry out specific projects authorized by Acts of Congress;
- Improve management and uses of public lands as approved within a land use plan and concurred with by Congress.

Within the past year, the LWCF was used to exchange 32 parcels of land which enhance BLM recreation and conservation programs.

Acquisition

In addition to property acquired through land exchange, the BLM processed 249 fee purchases during FY 1990 for lands or interests in lands in support of the various resource programs. These include 191 road easements which provide administrative and/or public access to the public lands.

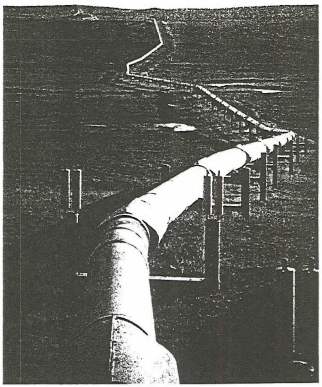
An additional 58 parcels of land were purchased with Land and Water Conservation Funds and Off-HighwayVehicle monies (California only) to enhance recreation and conservation programs.

Rights-of-way

With the granting of rights-of-way, individuals and other legal entities such as local and State governments can obtain access or other rights to the use of public lands. Communication facilities, ditches, canals, power lines, pipelines and railroads, and any other related transportation systems, or other facilities may be authorized by right-of-way on public land.

The BLM authorized 2,825 new rights-of-way in FY 1990. Types of facilities authorized include slurry water and natural gas pipelines and related facilities; electrical power plant and transmission lines; roads; telephone lines; communication sites for radio and other broadcast facilities; hydropower facilities; incinerators and drainage ditches.

In February 1990, the Office of the Federal Inspector General met with Northwest Alaskan Pipeline Company representatives to discuss an



Surveillance and enforcement activities along the Trans Alaska Pipeline Right-of-way will assist in maintaining a good environmental safety record.

issue affecting the current Alaska Natural Gas Transportation System (ANGTS) right-of-way in Alaska. The Alyeska Pipeline Service Company operator of the Trans-Alaska Pipeline System (TAPS) submitted an application to the BLM to replace 9 miles of mainline pipe in the Atigun River flood plain. The project is scheduled for major construction during the spring of 1991, and calls for new pipe to be buried approximately 30 feet east of the present alignment.

In June 1990, the BLM conducted meetings for members of the Federal Inspectors Office and the Alaska State Pipeline Coordinator to discuss related surveillance and enforcement activities along the TAPS right-of-way. The Alyeska Pipeline Service Company presented a briefing on the TAPS corrosion investigation and related repair work. The BLM continues to monitor the ongoing repair work being conducted by Alyeska on TAPS, and is concerned about maintaining a good environmental safety record along the entire 800 mile right-of-way.

CULTURAL RESOURCES

The BLM is steward for the Federal Government's largest, most varied, and scientifically most important body of cultural resources. Already, over 150,000 archaeological and historic properties have been recorded on the more than 9 million acres of public land that have been intensively inventoried. With this representing only slightly more than 3 percent of the public lands that the BLM administers, estimates place the number of cultural properties on public lands in excess of 4 million. These cultural resources span the entire period of human presence in the New World, a claim no other Federal agency can make. Because the BLM enjoys greater geographic variety of land holdings than any other agency, which in turn contributes to a greater variety of cultural resources, there are unexcelled opportunities for tracing whole cultural patterns through time and space on the public lands.

Various statutory authorities, most importantly the Federal Land Policy and Management Act (FLPMA), the National Historic Preservation Act (NHPA) of 1966, as amended, and the Archaeological Resources Protection Act of 1979 (ARPA), as amended, require the BLM to locate, evaluate, and manage its cultural resources; protect its most important and critically threatened cultural resources to pass them unspoiled to future generations; manage its cultural resources for their widest range of public benefits, including recreation, education, and scientific study; and promote partnerships and volunteerism to involve the public in inventory, interpretation, monitoring, excavation, stabilization, etc.

Looting and wanton destruction continue to erode and diminish the Nation's unique cultural legacy. To ensure that this legacy exists for future generations of Americans to enjoy, Congress requires that Federal agencies establish public awareness programs to educate the public on the importance and value of archaeological resources and enlist the public's assistance in protecting these resources.

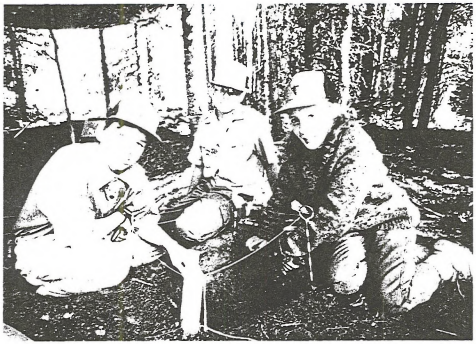
Adventures in the Past

Responding to the 1988 ARPA amendments, in FY 1990 the BLM developed its *Adventures in the Past* initiative, which is the BLM 's "umbrella" strategy for promoting public education and outreach in cultural resources, and for enlisting public involvement in the protection of archaeological resources. *Adventures* has as its goals increasing the public's enjoyment of cultural resources, demonstrating that the BLM is a good steward of cultural resources, and reducing the destruction of cultural resources.

The President's *America the Beautiful* initiative specifically includes *Adventures in the Past* under its banner. *Adventures* responds directly to President Bush's *America the Beautiful* goals of protecting and preserving America's treasury of public land resources, including cultural resources, and greatly enhancing the access of Americans to these resources and the recreational opportunities they afford. Adventures is being brought to the public through a series of regional events, the first of which was held in June, 1990, in the Four Corners area of Arizona, Colorado, New Mexico, and Utah.

Through *Adventures*, the BLM is:

- Expanding the number of interpreted cultural properties and places the recreating public can go to enjoy cultural resources;



One of the goals of the Adventures in the Past program is to offer unique education experiences in archaeology. Here, participants assist an archaeology dig in Alaska.

- Promoting rural economic development by showcasing cultural resources with recreation and tourism potential;
- Emphasizing on-the-ground presence of BLM personnel to combat looting, vandalism, and unauthorized uses of cultural resources, and promoting interagency efforts to fight such unauthorized uses;
- Promoting President Bush's and Secretary Lujan's education goals, particularly in the science and math fields, by (1) offering unique education experiences in archaeology; (2) encouraging scientific study of the BLM's outstanding cultural resources; and (3) identifying research projects with management benefits;
- Providing ethnic and minority groups with a focus of community identity and pride through the management, interpretation, and development of appropriate cultural resources; and
- Producing anti-looting public service announcements using celebrities such as authors Jean Auel and Tony Hillerman.

Future regional *Adventures* events will include the Great Basin Tribute in FY 1991 and the High Plains Tribute in FY 1992. These regional events will be followed by a series of thematic events, such as the Columbus Quincentennial, the Oregon Trail Sesquicentennial, "Trails West," "First Americans," and "Riches from the Earth." Some of the proposed thematic events, such as those on the history of ranching and mining, provide wonderful opportunities to build bridges with the BLM's historic constituents. Overall, regional *Adventures* events and activities offer outstanding opportunities to develop partnerships at all levels of society.

Volunteers/Cooperative Agreements

To date, the BLM has made outstanding use of volunteers, cooperative management agreements, and challenge cost share projects. In FY 1990, in excess of 11 percent of all volunteer time contributed to the BLM was for the benefit of the cultural resource management program, which was the equivalent of more than 45 work years of donated time and $850,000 in money. Volunteers significantly expand the BLM's management capabilities in the areas of inventory, protection, and study of cultural resources. Conservatively, we estimate that the BLM received an additional $850,000 in matching

funds from cooperative management agreements and challenge cost share arrangements. Cooperators include State and local governments, private organizations and individuals, volunteer organizations, nonprofit groups, the National Guard, etc. It also involves private and State universities, including more than 20 university field schools who train their students in archaeological methods on BLM-administered cultural properties.

Land Use Permits

In FY 1990, between 70 and 75 percent of cultural resource staff time continued to be devoted to compliance with section 106 of the National Historic Preservation Act in response to almost 9,000 land use applications. To ensure that section 106 review on these numerous land use applications is completed in a timely manner, the BLM has approximately 460 active cultural resource use permittees authorized to undertake inventory, reconditioning, collection, and/or excavation. As a result of archaeological work undertaken on these numerous land use applications, more than 7,000 new cultural resource properties were recorded in FY 1990, and data recovery was undertaken on about 500 properties.

Site Management and Protection

In FY 1990, the BLM continued to devote approximately one-third of its operating cultural resource management program budget to site management and protection. Activities included fencing, maintaining, stabilizing, patrolling, and monitoring more than 6,000 cultural properties, and installing interpretive and protective signing on more than 300 properties. Among the properties receiving protection were the more than 3,200 National Register of Historic Places properties, including the 22 National Historic Landmarks and 5 World Heritage properties formally recorded on the public lands.

In FY 1991 and beyond, cultural resource management program responsibilities will be augmented as a result of the new Native American Graves Protection and Repatriation Act (P.L. 101-601) and the National Park Service's recently implemented curation regulations in 36 CFR part 79. Among other things, they will require the BLM to locate archaeological and ethnographic collections legally taken from the public lands in the last 85 years and determine their importance to Native Americans, obtain a catalog of the contents of the collections, account for the contents and condition of the collections, inspect curation facilities, determine their geographical and cultural affiliation, consult with Native Americans, resolve competing ownership claims, and repatriate collections, etc. Much of this work must be completed within 5 years.

WILDERNESS RESOURCES

The BLM now manages 28 wilderness areas in nine States totaling approximately 474,000 acres. This total includes portions of three Forest Service wilderness areas designated in Nevada in 1989. These wilderness units, like several other BLM wilderness areas, will be managed jointly by the BLM and the Forest Service.

The Bisti Wilderness Area in New Mexico is one of many wilderness areas managed by the BLM. (Photo by Ann Richards)

In FY 1990, the BLM continued the preparation of the final wilderness study reports that serve as the major documentation for statewide wilderness recommendations. All wilderness environmental impact statements (EIS's) were completed and filed with the Environmental Protection Agency by the end of the year. All wilderness study reports are scheduled to be completed by the end of FY 1991, with the recommendations of the Secretary of the Interior to be submitted to the President on or before October 20, 1991.

The BLM continued to provide interim management for all BLM wilderness study areas (WSA's) to assure that wilderness values in these areas are maintained until Congress decides which areas should be designated wilderness. The interim management program involves surveillance and signing of more than 26 million acres of public land in WSA's with more than 28,000 miles of boundary. In addition, the BLM completed several public information initiatives to be sure that public land users were aware of special management requirements for WSA's.

RECREATION RESOURCES

While the BLM remains committed to serving its traditional constituents, efforts to direct the Bureau's focus toward achieving a better balance in its management programs are well underway. A critical element of this effort is the implementation of the BLM's long-range recreation initiative, *Recreation 2000: A Strategic Plan.*

Recreation 2000

Through *Recreation 2000*, the BLM's outdoor recreation program is directed at ensuring the public has the widest possible diversity of recreation opportunities. The BLM's recreation program complements other Federal recreation programs. Not only do BLM-managed public lands provide resources rivaling those found on other agency lands, they also offer the greatest capacity to accommodate future recreation growth and demand. As problems of overcrowding confront our National Parks and Forests, the BLM will be able to absorb some of the demand. While there were nearly 72 million recreational visits to national public lands in 1990, there is still room for greater numbers of visitors.

Recreation 2000 offers the BLM vast opportunities to involve the public in the management and enjoyment of their land. The BLM's move to seek out new constituents responds to the rapid changes in population and social conditions that have taken place in the United States over the past 40 years. Today's visitors are more likely to be from an urban setting and their knowledge of the land largely reflects an urban experience. Consequently, the public has limited understanding of land management principles or the role public lands play in providing food, fiber, and other necessary products. Despite this, the public continues to visit public lands for outdoor recreation in ever increasing numbers.

The BLM's national recreation program in 1990 emphasized the following five major initiatives:

1. *Back Country Byways:* This is the BLM component of the National Scenic Byways program. The purposes are to provide opportunities for scenic driving; tell BLM's multiple use story; and assist rural economies in enhancing tourism opportunities. Each BLM State Office has identified at least two routes to be included in a National Back Country Byways system. A total of 37 Byways (almost 2,000 miles) have been dedicated through 1990. The BLM has received assistance with the Back Country Byways program from such large corporations as American Izusu Motors and the Farmers Insurance Group of Companies through an agreement with the American Recreation Coalition.

2. *Adventures in the Past:* This is designed to provide opportunities for the public to learn about their past; demonstrate the wide diversity of cultural resources located on BLM-managed public lands; and raise public awareness for the need to protect our fragile cultural heritage. As part of the initiative, in 1990 the BLM hosted "The Four Corners Tribute" and an interagency Four Corners Governors' Conference in Colorado. A total of 26 partners participated in the celebration and conference.

3. *Watchable Wildlife:* This is an effort to promote enhanced opportunities to experience wildlife; promote learning about wildlife needs; and foster active public support for wildlife conservation and management. In FY 1990, the BLM executed a national Memorandum of Understanding between Federal land manage-

ment agencies, State wildlife agencies, and national wildlife conservation organizations to foster cooperation in implementing the Watchable Wildlife program. In addition, State watchable wildlife viewing guides were developed in Oregon, Utah, Idaho, Montana, and Colorado.

4. *Recreational Fishing:* A cooperative effort between the BLM, the Forest Service and the recreational fishing industry, this initiative is directed at improving recreational fishing opportunities on the public lands by enhancing fisheries habitat; securing better public access with a special emphasis on improving fishing access for the disabled; and encouraging angler ethics and appreciation of aquatic resources through resource education and interpretive programs.

The BLM's outdoor recreation program seeks to offer the public the widest possible diversity of recreation opportunities. (Photo by Jim Pickering)

5. *Rural Tourism:* This is designed to broaden and enhance the economic base of many of the rural communities located adjacent to BLM public lands. Key elements of the initiative include improving adventure travel opportunities such as white water rafting, guided tours and wilderness vacations to enhance and assist local business opportunities; increasing opportunities for emerging forms of BLM public land recreation such as mountain biking, rock climbing, off-highway vehicles, and caving; working with firms and organizations producing general and specialized recreation publications to inform and direct visitors to appropriate recreation areas and facilities; providing specialized facilities (visitor centers, museums, ranger stations) designed to attract visitors to rural communities; and developing or improving other recreation facilities (campgrounds, trails, boat launch areas) which provide both high quality recreation opportunities and support local tourist related business.

Additional outdoor recreation activities and programs on BLM public lands include the following:

Mountain Biking: The BLM, particularly in the Southwest, has made major strides in increasing opportunities for mountain biking activity with programs underway in Colorado, Utah, and California. The BLM's leadership in mountain bike management is showcased by both the development of trails, staging areas, and associated facilities and the cosponsoring of mountain bike management activities such as the 1990 World Mountain Bike Championships and Mountain Bike Management Symposium in Durango, Colorado.

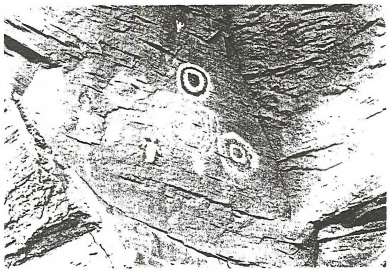
River Management: The BLM is a leader in river management in the West, administering one-fifth of all wild and scenic rivers in the National Wild and Scenic Rivers System. The BLM manages more rivers (32 rivers and 2,000 miles) than the National Park Service (NPS). In addition, the BLM manages more wild river miles than the Forest Service and more recreational miles than the NPS. The BLM has also taken a leadership role in river management by working closely with commercial and noncommercial operators and cosponsoring a number of national river management meetings including Confluence '89 and '90 and the Idaho Rivers Symposium. In 1990, boundaries were identified and management plans were prepared for 17 wild and scenic river segments in Alaska, California, Montana, New Mexico, and Oregon.

Off Highway Vehicle (OHV) Management: The BLM is recognized both nationally and internationally as a leader in the management of OHV recreation. Because many of the public lands the BLM administers are easily accessible

by vehicle, recreational vehicle travel is a major land use activity. Currently, the BLM has over 10,000 miles of formally dedicated OHV trails and another 53,000 miles available for OHV use. BLM OHV management efforts are directed at vehicle use designations, operation of special OHV recreation areas, and improving OHV user safety and land ethics. The BLM is a charter member of the national "Tread Lightly" campaign and was the first to enter into partnership with the OHV industry to provide safety and outdoor ethics training to all-terrain vehicle users.

Cave Management: The BLM administers over 900 caves scattered throughout the Rocky Mountain States from Montana to New Mexico. Many of these caves, such as the Horsethief Cave in Wyoming, are recognized by the national and international spelunking community as significant cave resources. As Federal cave management policies are formalized, the BLM will be in a leadership position in the management of caves.

Arid Land Recreation: The BLM manages millions of acres of arid and semi-arid lands throughout the West. Recreation management on these lands requires special knowledge, skill, and experience. This is especially true of the management of recreation in wilderness areas. With the passage of the Arizona Wilderness Bill in 1990, the BLM manages more than 1.6 million acres of designated wilderness. Additionally, over 26 million acres remain in wilderness and WSA status. In anticipation of increased public demand for arid land recreation activity brought on by future wilderness legislation, the BLM has moved quickly to develop needed skills among its managers. The BLM, in cooperation with the National Outdoor Leadership School, has developed specialized training in arid lands/low-impact recreation management to meet future needs.



Evidence of past cultures can be seen from cultural resources located on BLM-managed lands. Pictured here is rock art found in Colorado's Canon Pintado.

Ecotourism: This is tourism based principally on natural and cultural resources such as caves, wildlife, scenic areas, wetlands, fossil beds and archaeological/historic sites. The BLM's recreation management program, as defined in *Recreation 2000: A Strategic Plan*, is directed at these resource dependent recreation opportunities. Through programs such as Back Country Byways, Watchable Wildlife, Adventures in the Past, Rural Tourism and others, the BLM will have a significant impact on ecotourism activities in the Western United States.

In FY 1990:

- Public lands accommodated nearly 72 million visits, an increase of 19 percent over FY 1989, and more than 518 million visitor hours, an increase of 5 percent over FY 1989.
- 7,688 volunteers contributed to the recreation program with a savings to the Federal government of more than $3.1 million.
- 77,486 camping and day-use permits were issued, a 7 percent increase over FY 1989. An additional 10,017 special recreation permits were issued, a 4 percent increase over the previous year. About $1.6 million in fees were collected. This represents a slight increase from the fees collected in FY 1989.
- Approximately 93.5 million acres of public land were designated open to off-road vehicle use, subject to special operating requirements. Approximately 51.3 million acres were designated for limited off-road vehicle use while 3.1 million acres were closed to off-road vehicle use.

In 1990, BLM lands received nearly 72 million visits. Here, a visitor receives information at Red Rock Canyon Recreation Lands in Nevada. (Photo by Maxine Shane)

- The BLM continued the challenge cost sharing program in recreation to encourage private contributions for recreation resource management projects. The BLM allocated $525,000 for cost-sharing projects. The estimated input from private partners in these projects was over $1.4 million.

Showcase Projects

During FY 1990, the BLM's *Recreation 2000* program emphasized a national "Showcase" effort to demonstrate the BLM's commitment to making a difference on-the-ground. Showcase projects focused on activities or opportunities which offer high visibility, wide public appeal, promotion of appropriate land ethics and land stewardship, and direct public involvement.

Showcase projects in *Oregon* included realignment and paving of the Yaquina Head lighthouse drive, development of bike trails and scenic overlooks; development of a five-panel kiosk at the west entrance of the North Umpqua Wild and Scenic River Corridor; and renovation and expansion of the Snake River-Spring Recreation Site, including construction of a new boat ramp, docks and parking facilities.

One of *Idaho's* showcase projects was sponsorship of the Salmon River Centennial Float, a 406-mile float trip from Stanley to Lewiston on one of the West's premier white-water rivers. The trip was organized by the Idaho Outfitters and Guides Association. The BLM participated in a number of local celebrations commemorating the event.

Alaska continued to implement the winter trail and cabin program in the White Mountains National Recreation Area with construction of a cabin to provide summer and winter recreation opportunities for hikers, backpackers, dog mushers, cross-country skiers and snowmobile users.

Colorado signed a cooperative agreement for management of the Arkansas Headwaters Recreation Area with the Colorado Department of Parks and Outdoor Recreation. Projects in the Arkansas Headwaters included area signing, trail construction, and publications. Other construction included restroom/changing, picnicking, and boat launching facilities in the Pinnacle Rock Recreation Site. Colorado also dedicated the Alpine Loop Back Country Byway with the involvement and assistance of 21 different partners. The project involved development of disabled access restroom facilities, interpretive displays and hiking trails.

In *New Mexico's* Wild Rivers Recreation Area, the 13-mile Wild Rivers Back Country Byway was repaved, unsafe conditions on the La Junta Trail were corrected, and a visitor information station was constructed at the entrance to the recreation area. In the Organ Mountains Recreation Area, the old Cox family ranch was renovated. The ranch house will become a visitor center. Other aspects of the Organ Mountains program included development of interpretive/hiking trails and interpretive sites, and institution of a day use fee program for the natural area and nearby campground.

Recreational fishing is popular along the thousands of miles of rivers managed by the BLM. Here, Elroy Masters of BLM's Yuma District gives Tim Swiney, Special Olympic athlete, some fishing pointers.

California Showcase projects included improvements to the Hole-in-the-Wall Campground, including installation of 23 new units consisting of tables, fire rings, water system and restrooms, and construction of the Teutonia Peak Trail with the assistance of the California Conservation Corps and the Sierra Club. Improvements in the Merced Wild and Scenic River included renovation of the historic Briceburg House as a visitor center, renovation of an old railroad grade as a hiking trail, and construction of a new boat launch facility to improve river access. Work on the Bizz Johnson Trail involved the renovation of old railroad grade including two tunnels and nine trestles.

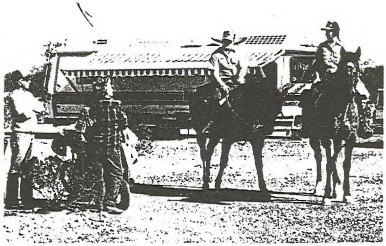
In *Wyoming*, interpretive sites along the Historic Oregon/Mormon Trail were developed. In addition to interpretive work, a parking lot and a walking trail were developed to help visitors observe historic wagon ruts. A volunteer project was completed in South Dakota to develop an equestrian campground, picnic area and access to the South Dakota State Centennial Trail.

Montana completed the Holter Lake Accessibility Project, designed to provide disabled access to one of the most heavily used recreation lakes in the State. The project included installation of a fish-cleaning station, renovation of boat mooring and launching facilities, and construction of an access trail, swimming beach, and visitor information station.

The *Utah* BLM completed improvements to the Bridge Hollow Campground including installation of a water system with well, pumps and outlets; new parking barriers, fire rings, tables, information kiosk, public telephone and the renovation of two vault restrooms. These actions will allow Bridge Hollow to become a fee site in 1991. New disabled access restrooms were constructed in the Calf Creek Campground, along with repair and repainting of tables, benches and barriers, and renovation of the existing water system.

Arizona initiated a multi-year project in the Burro Creek Recreation Area that in 1990 included construction of disabled access restrooms and shade ramadas. Survey and design of an access road, visitor contact station and boundary fence to be completed in subsequent years was also accomplished. Additionally, a Recreation Activity Management Plan for the Parker Strip Recreation Area and the dedication of the Parker Dam Back Country Byway were completed.

In *Nevada*, a formal agreement between the BLM's Carson City District and the City of Carson City was signed to provide for coordination in the planning and management of recreation opportunities within the city limits of Carson City. Also, the Eastern Sierra Recreation Council, an interagency organization, was formed to improve visitor services in the Eastern Sierra Region of California and Nevada. Cooperators include the BLM, Forest Service, Nevada



Winter visitors set up camp at La Posa Longterm Visitor Area in Arizona. In 1990, over 77,000 camping and day-use permits were issued by the BLM.

One of Idaho's showcase projects was sponsorship of the float trip commemorating Idaho's centennial.

State Parks, Carson and Washoe County Park Systems, local Convention and Visitors Bureaus, the Nevada Commission on Tourism, and a number of private recreation interests.

ALASKA LANDS PROGRAMS

The BLM in Alaska continued to make progress toward conveying all entitlements to the State of Alaska and various Alaska Native village and regional corporations. During FY 1990, more than 780,000 acres were patented and an additional 88,800 acres tentatively approved for patenting to the State of Alaska. Native corporations received title to over 1.5 million acres of patented land and interim conveyance of 107,000 acres. Five hundred fifty-one Native allotment applications were processed.

Other lands-related accomplishments included processing about 25,000 annual filings under the public land laws, issuing 28 grants of right-of-way, surveying 2,200 miles of line and setting 4,119 survey monuments.

Land use issues that received attention during FY 1990 included those related to the Federal takeover of the State subsistence management program on Federal lands in Alaska. A major environmental impact statement for the proposed opening of the A-J Gold Mine near Juneau was begun as a joint effort by BLM-Alaska and a private contractor. A resource management plan for public lands along the Trans-Alaska pipeline corridor was completed that will open more lands to selection by the State of Alaska and provide management direction for the BLM to meet the public needs and demands for land.

Construction plans were announced for a major natural resource education center on BLM lands in Anchorage. School groups and various private organizations have long sought such a facility that will complement the Secretary of Interior's education initiative and BLM's 15-year tradition of being host to natural resource education programs for about half the school-age children in the State.

As part of its commitment to *Recreation 2000*, and the upcoming international celebration of the anniversary of the completion of the Alaska-Canada Highway, the BLM has accelerated its plans to upgrade and refurbish its major campgrounds in the State.

A native Alaskan boy holds a newborn pup who may one day race in the world-famous Iditarod sled dog race. The BLM is coordinating with the Iditarod National Historic Trail Advisory Council and several volunteer groups to nominate sites along the trail to the National Register of Historic Places. (Photo by Ed Bovy)

ENERGY AND MINERALS PROGRAMS

OIL AND GAS

Oil and Gas Leasing

The Mineral Leasing Act of 1920, as amended, and the Mineral Leasing Act for Acquired Lands of 1947, as amended, give the BLM authority to issue mineral leases on about 570 million acres of public land, including national forests and private land where mineral rights have been retained by the Federal Government. Since passage of the Onshore Oil and Gas Leasing Reform Act in 1987, all public land that is available for oil and gas leasing must first be offered through a competitive leasing process in which BLM State Offices offer oil and gas parcels through oral auctions. Parcels that are not sold at these auctions are then available for a 2-year period for noncompetitive leasing.

The oil and gas leasing program continued to be affected by a depressed domestic oil and gas industry. In FY 1990, the BLM conducted 45 competitive lease sales in which 9,455 tracts covering more than 9 million acres were offered, with 3,528 parcels involving more than 1.9 million acres receiving bids. The bonus bids received totaled over $52.3 million.

Noncompetitive leasing activity the day after each competitive lease sale conducted pursuant to the Reform Act resulted in 5,927 tracts being made available. These covered about 7.1 million acres, with 2,049 parcels covering about 2 million acres being filed. Additional tracts are leased during the 2-year period after they are offered. As of September 30, 1990, there were 79,577 oil and gas leases in effect on approximately 63.6 million acres.

As a result of study reports submitted to Congress by GAO and the National Academy of Sciences, in FY 1990 the BLM became more involved in planning and NEPA documentation. On May 7,1990, additional planning guidance was issued Bureau-wide through BLM handbook H-1624-1, *Planning for Fluid Mineral Resources.* It was determined that 36 resource areas should have new or amended land use plans dealing with oil and gas leasing and operations. These new plans should help resolve issues involving recent court cases.

Oil and Gas Operations

The BLM is responsible for the approval and inspection of drilling, production, and abandonment operations on Federal and Native American Indian leases to ensure compliance with regulations for protection of the surface and subsurface environment, public health and safety, and proper accountability of oil and gas production. In 1990, there were 23,222 producing leases with 83,344 operational wells. Of these, 3,788 leases and 8,905 producible wells were located on Native American Indian lands. Together, the leases produced 156 million barrels of oil and about 1 million cubic feet of gas.

Federal and Native American Indian leases generated about $399 million in bonus, rent, and royalty payments in FY 1990. Fifty percent (or in the case of Alaska, 90 percent) of the revenue generated from the public land is returned to the States where production occurs. Payments are distributed to the various tribes and individual Native American Indians. The Minerals Management Service (MMS) collects and distributes these receipts.

The BLM has developed a series of six published Onshore Oil and Gas Operating Orders which establish minimum technical standards for oil and gas operators.

Order No. 1	Approval of Drilling Operations, published in 1983.
Order No. 2	Drilling Operations, issued in 1988.
Order No. 3	Site Security, issued in 1989.
Order No. 4	Measurement of Oil , issued in 1989.
Order No. 5	Measurement of Gas, issued in 1989.
Order No. 6	Hydrogen Sulfide Operations, issued November 23, 1990.

Three additional Orders are being developed — No. 7, Disposal of Produced Water, No. 8, Well Workover/Completion, and No. 9, Waste Prevention and Beneficial Use.

The BLM initiated and revised an Inspection and Enforcement Strategy in FY 1990 that provides for greater production accountability while continuing to emphasize a balanced inspection program that includes drilling and environmental inspections. It also includes inspection of all producing Native American Indian leases annually, beginning in FY 1991. This is a long-range strategy which will be implemented in a progressive step-wise plan over the next few years and responds to program criticism by the Office of Inspector General and GAO.

Cooperative Agreements are encouraged by the BLM and such agreements have been negotiated with the Navajo, Ute Mountain Ute, and Jicarilla Apache Tribes. Such agreements provide for greater inspection participation by Native American Indian Tribes with shared funding by the BLM.

The BLM is also working with MMS and the Bureau of Indian Affairs and has developed a Memorandum of Understanding between the agencies to further address the concerns of the Senate Select Committee on Indian Affairs regarding production accountability on Native American Indian leases.

Low oil prices that began in 1986 continued until August 1990, and the BLM extended the suspension of production requirements on stripper/marginal wells for another year to prevent premature abandonment of oil and gas wells and potential loss of recoverable reserves. As of September 1990, there were 491 such leases in suspension. During FY 1990, the BLM held a series of public meetings to obtain comments and information from the public, State and local governments, and industry, to assist the BLM in evaluating further continuance of the policy and viable alternatives. The BLM is currently evaluating the comments received as well as subsequent written comments.

The BLM has continued its aggressive program to identify all wells that are potentially draining Federal and Native American Indian resources. By the end of FY 1990, the majority of potentially draining wells had been identified and most offices were moving toward resolving the identified drainage situations. The emphasis of the program is on efficient prevention of recovery of lost revenues due to drainage. The BLM also made progress in updating its drainage protection manual and handbook and clarifying its regulations. The manual and handbook are scheduled to be released in FY 1991 and a proposed rulemaking published in the Federal Register.

GEOTHERMAL

Geothermal Leasing

The Geothermal Steam Act of 1970 provides the BLM authority to issue leases on public, withdrawn, and acquired lands administered by the Department of the Interior and Agriculture. The Geothermal Steam Act Amendments, which were effective September 22, 1988, modified the Act.

Final regulations amending existing regulations were published on June 28, 1990, to implement the Steam Act Amendments (P.L. 100-443). This law assists the lessee by allowing up to two 5-year extensions beyond the primary term if the lessee has been and continues to be diligent in exploring for and developing geothermal resources. In FY 1990, there were 12 leases extended under these provisions, 4 in California, 5 in Oregon, and 3 in Utah. It is anticipated there will be a greater number of requests next year as more leases reach the end of their primary term.

During FY 1990, the increased activity required to comply with the National Environmental Policy Act of 1969, coupled with the depressed economy, reduced the demand for new geothermal leases. If the demand for electricity should increase, industry would be provided with a greater incentive to explore for and develop geothermal resources. However, during FY 1990, there were no geothermal competitive sales held. One competitive lease covering 441 acres was issued in Nevada . Nineteen noncompetitive leases covering 28,519 acres were issued (California: 1 on 1,271 acres, Idaho: 1 on 678 acres, Nevada: 12 on 18,566 acres, Oregon: 4 on 5,764 acres and Utah: 1 on 2,240 acres). Proposed legislation to create the Newberry Volcanos National Monument in Oregon will require a competitive sale to be held in 1991.

At the end of FY 1990, there were 191 competitive leases in effect on 324,063 acres (California, 117 leases on 189,195 acres; Idaho, 2 leases on 3,061 acres; New Mexico, 2 leases on 2,780 acres; Nevada, 45 leases on 82,198 acres; Oregon, 8 leases on 16,565 acres; and, Utah, 17 leases on 30,265 acres). There were 401 noncompetitive leases in effect on 627,587 acres (Arizona, 1 lease on 783 acres; California, 89 leases on 122,563 acres; Colorado, 3 leases on 2,751 acres; New Mexico, 6 leases on 11,566 acres; Nevada, 143 leases on 243,705 acres; Oregon, 146 leases on 220,912 acres; and, Utah, 13 leases on 25,027 acres).

Geothermal Operations

At the end of FY 1990, geothermal production generated 1037.39 megawatts (MW) of power on or from Federal lands. In California, 725 MW was generated from The Geysers; 117 MW from East Mesa; 78 MW from Coso Hot Springs; and 10 MW from Wendel-Amedee. In Nevada, 56.40 MW was generated from Dixie Valley, 6.72 MW from Beowawe; 6.24 from Steamboat; 5 MW from Desert Peak; 4 MW from San Emidio; and, 1.53 MW from Soda Lake. There is also a direct use plant at Round Mountain. In Utah, 20 MW was generated from Roosevelt Hot Springs and 7.5 MW from Cove Fort.

In California, near the town of Mammoth Lake, the PLES I 10-MW facility began initial construction and is scheduled to begin commercial operation by early 1991. Also, expansion is proposed at Coso, Gals Mountain, Lake City-Surprise Valley, and Randsbury Known Geothermal Resource Area, totaling 124 MW. Nevada has power plants under construction at Steamboat and Soda Lake totaling 10.79 MW on Federal land. In Oregon, the Pacific Northwest Power Planning Council has indicated interest in buying power. This will help stimulate interest in geothermal exploration. Drilling or environmental data collection is planned in six areas of the State.

During FY 1990, geothermal leases and associated operations generated about $20.3 million in bonus, rent and royalty payments to the Federal Government.

COAL

The BLM serves as the focal point of the Department of the Interior's Federal coal program and is responsible for ensuring coordination with State and local governments, industry, conservation groups, and other agencies concerned with the management of Federal coal. The Mineral Leasing Act, as amended and supplemented, The FLPMA, and the Surface Mining Control and Reclamation Act of 1977 provide the statutory bases for the Federal coal management program.

The BLM manages about one-third of the nation's coal resources underlying approximately 76 million acres of public lands, predominantly in the Western States. These Western Federal coal lands contain approximately 60 percent of the total Western reserves. Most of these Federal coal reserves are concentrated in six Western States: Colorado, Montana, New Mexico, North Dakota, Utah, and Wyoming.

At the end of FY 1990,

- There were approximately 14.43 billion tons of recoverable reserves on 493 Federal coal leases covering 723,542 acres.
- There were 129 producing Federal coal leases, which produced 234.5 million tons. This production represented almost 24 percent of the total United States production in 1990.
- Federal coal royalty revenues collected by the Department of the Interior totaled $203.6 million. Coal production on Indian lands totaled about 26 million tons with royalties of over $50 million in FY 1990.

Coal Leasing

During FY 1990, there were six lease sales, three in Utah and one each in Alabama, Colorado, and Wyoming. These sales covered approximately 5,906 acres of land containing 30 million tons of recoverable coal reserves. The sales generated bonus bids of $9.4 million.

In addition, 21 coal preference right lease applications (PRLA's) were either withdrawn by

the applicants or rejected by the BLM. This brought to 41 the number of coal PRLA's remaining to be processed.

In addition to these leases and PRLA's, four licenses to mine and six exploration licenses were being administered by the BLM.

Coal Operations

In the 70 years since the Mineral Leasing Act was enacted, almost 2 billion tons of coal have been produced from Federal land. The market value of this coal was nearly $25 billion, on which royalties exceeding $1.2 billion have been paid to the U.S. Treasury. Since 1920, more than 454 million tons of coal have been produced from Native American Indian lands. That coal was valued at more than $5.2 billion and generated more than $324 million in revenue for Native American Indian tribes and allottees.

The BLM has statutory and regulatory responsibility for oversight of coal mining operations on Federal and Native American Indian land. This responsibility includes providing technical assistance to Indian tribes, allottees, and the BIA, including preparing economic, resource, and mining assessments and analyses; approving exploration and mine plans; supervising exploration, development and abandonment of operations; recommending bonds; and conducting inspection and enforcement and production verification.

One responsibility on Federal lands is administering 24 logical mining units (LMU's). An LMU is a designated area from which the coal can be developed as a unit and as part of a single mining operation. An LMU may consist of Federal leases only or of Federal and non-Federal land (including Native American Indian land), must be contiguous, and cannot exceed 25,000 acres in size. During FY 1990, the BLM approved two of these 24 LMU's and 15 LMU applications were being processed at the end of FY 1990. During FY 1990, the BLM also processed 21 readjustments of lease terms and conditions and 17 record-title assignments on Federal coal leases.

The primary components of inspection and enforcement (I&E) are ensuring compliance with the law, regulations, lease terms and conditions, exploration or mine plans, and all notices and orders; identifying any trespass; and conducting production verification. Production verification (PV) is the process of independently calculating and certifying mineral production for royalty payment purposes. The process comprises two essential elements: checking reported production against mine and other records using the company method to determine accuracy of production measurement; and making an independent engineering determination using one or more alternate methods to assess the accuracy of the reported production. The PV's primary goal is to verify the amount of coal being mined and to ensure that production is accurately reported, thereby ensuring that proper royalties are paid for the extraction of coal on federal and Native American Indian lands.

National I&E/PV guidelines for coal and other solid minerals include Solid Minerals Assistance Teams (SMAT's) to help promote consistency and monitor compliance with the guidelines. During FY 1990, a SMAT visited the Tulsa District to review mine-specific I&E/PV plans, inspection procedures and methods of production verification. The significance of production verification will continue to grow as Federal coal royalty revenues increase as a result of expanded production. Several BLM field offices are exploring the potential for computerizing production verification procedures and other methods of ensuring accuracy and reliability of the production verification program.

The BLM continued drafting revisions to the Federal Coal Management Rules (43 CFR Group 3400) during FY 1990.

OIL SHALE

The Mineral Leasing Act gives the Secretary of the Interior authority to lease oil shale on Federal lands. The BLM has the Federal management responsibility for 80 percent of the oil shale resource concentrated in the Green River Formation in Colorado, Utah, and Wyoming. The reserves in this 25,000-square-mile formation are estimated to be nearly 2 trillion barrels of shale oil. Approximately 731 billion barrels of oil could be recovered with current technology. However, the cost of extracting the oil with present technology makes it noncompetitive against conventional energy sources.

The only two existing oil shale leases, tracts C-a and C-b in Colorado, were in suspension during FY 1990. The lessees maintained the mines and related facilities and monitored the environmental effects while the leases were inactive.

SOLID NONENERGY LEASABLE MINERALS

The BLM also supervises activities of lessees and permittees who explore for, develop, and produce non-coal solid leasable minerals on Federal and Indian lands. At the end of FY 1990, there were 539 Federal leases comprising 598,239 acres, plus 91 prospecting permits covering 78,496 acres. In addition, there were 18 preference right lease applications covering approximately 32,850 acres. The combined production of solid nonenergy leasable mineral commodities from Federal and Native American Indian land was valued at $895 million. More than $40 million in royalty revenues was collected from Federal lands.

On Federal lands, more than 89 percent of the acreage and nearly 82 percent of the leases for solid nonenergy leasable minerals involve potash, sodium and phosphate.

The passage of the 1990 Clean Air Act Amendments, which mandate greatly reduced sulphur emissions, is likely to result in an increased demand for leasing certain nonenergy minerals. It is anticipated that interest in leasing nahcolite will be particularly noteworthy, since nahcolite has been recognized as a promising flue-gas desulfurization agent in coal-fired power plants.

Nonenergy Leasable Minerals: Fiscal Year 1990

	Leases	*Acres*	*Tons Mined*	*Royalties Paid to Gov't*
Potash	206	333,444	2.0 million	$ 3.6 million
Sodium	100	120,646	4.5 million	$ 17.3 million
Phosphate	134	81,432	4.6 million	$ 5 .2 million

Other Nonenergy Leasable Minerals

Mineral	*States*	*Mineral*	*States*
Uranium	Arizona, New Mexico, Washington, Wyoming	Barite	Arkansas, Missouri
Lead/zinc	Missouri	Chat	Oklahoma
Copper	Arizona, California, Montana, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Washington, Wyoming, Utah	Gypsum	California, New Mexico
		Asphalt	Oklahoma
		Tungsten	Nevada
		Bentonite	Wyoming
		Quartz	California, North Carolina
Tar sand	Utah	Amethyst	Georgia
Gilsonite	Utah	Garnet	Idaho
Gold	Arizona, Idaho, Washington	Granite	Oklahoma
Flourspar	Illinois	Iron Ore	Idaho, Minnesota
Limestone	New Mexico, Oklahoma, Utah, Virginia	Olivine	North Carolina
Titanium	Minnesota	Quartz crystals	Arkansas
Silica sand	Arizona, California, Nevada, Oklahoma	Combined Hydrocarbons	Utah
Feldspar	Georgia	Crushed stone	Washington
Clay	Alabama, Missouri	Dimension stone	Oregon

MINERAL MATERIALS

BLM personnel examine concentrates from a Denver Gold Saver processing machine.

The BLM's mineral materials program, also referred to as the salable minerals program, began with the passage of the Minerals Act of July 31, 1947. In 1955, Congress amended the Act by specifying that common varieties of previously locatable minerals, such as sand, gravel and stone, were to be disposed of under the provisions of the 1947 Act. Since that time, the BLM has disposed of mineral materials either by sale to the general public or by free-use permit to qualified government or non-profit organizations as provided in the Act. In FY 1990, over 5 million cubic yards of mineral materials, valued at approximately $3 million, were produced from 1,860 sales and free-use permits.

MINING LAW ADMINISTRATION

The Mining Law of 1872, as amended many times in its 118-year history, serves as the statutory basis for the disposition of locatable minerals from Federal land. This law embodies four fundamental principles: self-initiation of mineral rights, free access to and across Federal lands, security of title to the mineral deposit(s), and the concept of due diligence. Federally-owned locatable minerals include valuable deposits of precious metals, base metals, strategic and critical minerals, industrial minerals such as cement-grade limestone, bentonite, uncommon varieties of building stone and other minerals. Mining claims for sand and gravel and other common varieties located prior to the 1955 Congressional amendment of the Materials Act of 1947 also exist.

Another mineral resource, oil shale, attracted considerable attention during FY 1990. Oil shale, which is now disposed of on Federal land via the Mineral Leasing Act of 1920, may be held, worked and patented under the Mining Law if claim location and discovery of valuable deposits preceded 1920. Currently, there are 1,601 unpatented mining claims for oil shale for approximately 252,239 acres in the States of Colorado, Utah, and Wyoming. Additionally, 364 of these claims in Colorado and Utah totalling 54,077 acres are encompassed in 27 patent applications currently pending in the BLM .

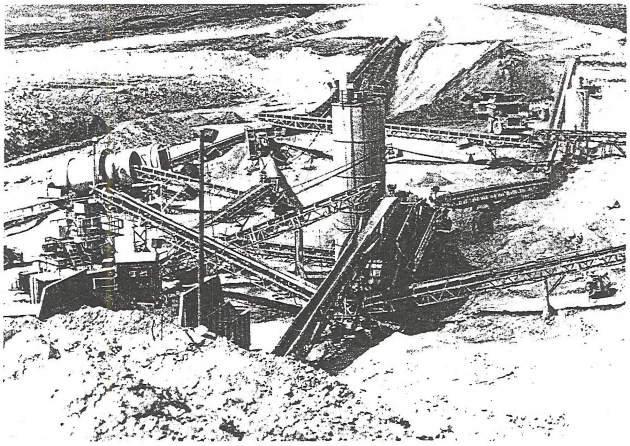
The BLM testified in 1990 that several aspects of the Mining Law warrant further evaluation and consideration for possible amendment. These are annual labor; the distinction between common varieties of mineral materials subject to sale and "uncommon varieties" subject to location under the Mining Law and the question of obtaining a fair return to the government for surface use and for issuance of a patent.

The BLM considers the statutorily set purchase prices for the patenting of mining claims to be too low, and is willing to explore other alternatives. Among these alternatives are the elimination of the surface estate patents, while continuing to allow patenting of the subsurface estate. Other alternatives include raising the purchase price amount paid for the surface estate within the patent; retaining the existing provisions for transfer of the mineral estate as a

reward for risk taking; or allowing the purchase of the surface estate of a mining claim, at fair market value, only after patent and after actual mining operations have started.

Approximately 97,400 new claims were accepted for recording by the BLM during FY 1990, which is a decline of over 34 percent from the previous year. The BLM issued 34 patents for lode, placer and millsite claims, for a total of slightly less than 8,027 acres.

Under the mandates of the FLPMA, the BLM must provide for exploration, development and extraction of energy and mineral resources under multiple-use management, while preventing unnecessary or undue degradation of the public land. The BLM asserts that Federal land managers can use the existing Federal, State, and local regulatory framework to solve almost any environmental issue. The BLM has initiated an accelerated surface management program which utilizes the existing authorities to demonstrate that the often cited "problems" of the mining law can be successfully resolved without modifying the law.



Gold mining operation.

ENGINEERING SERVICES

When the BLM was established in 1946, it inherited its physical facilities from its parent agencies, the General Land Office and the Grazing Service, along with a primitive road system that reflected the miscellaneous needs of ranchers, mining companies, railroads and county and State governments. Since the mid-1960s, the BLM has constructed numerous roads and trails necessary for administration of the public lands. Where suitable leasable offices and other facilities are not available, the BLM has constructed its own office buildings, warehouses, shops and other facilities tailored to the Bureau's resource management responsibilities.

In FY 1990, the BLM continued work on the Alaska Fire Service building, the Flagstaff Hill Visitor facilities, the Yaquina Head Road in Oregon, Quail Hill Road in Arizona, and sanitary facility upgrading at various recreation sites in Montana, as well as other smaller construction projects. Maintenance projects such as major road and recreation site work and building repair work were also done. In addition, the BLM completed initial data gathering for the maintenance inventory and condition survey program. This data will be used to distribute funding to the field in FY 1991 and as a basis for requesting funding in FY 1992.

The BLM provided maintenance to about 140 office buildings, more than 800 other BLM-owned buildings and associated water and sewer systems, approximately 800 developed family unit recreation sites, 5,000 undeveloped (without water) sites, approximately 10,000 miles of roads, more than 1,000 miles of trails, and 30 bridges.

Additional support was provided through survey and design of various range improvement and watershed construction projects. The BLM continued its dam inventory and hazard assessment programs in FY 1990.

PLANNING

The FLPMA provides for the development and maintenance of land use plans for the public lands. Special emphasis is placed on public participation. In 1979, planning regulations (43 CFR Part 1600) were issued establishing resource management plans as the basic planning document. Other legislation containing planning requirements includes the National Environmental Policy Act of 1969, the Federal Coal Leasing Amendments Act of 1976, the Surface Mining Control and Reclamation Act of 1977, and the Public Rangelands Improvement Act of 1978.

Planning helps the local BLM manager, public land users, and others resolve resource management conflicts and land use issues. The BLM seeks to improve resource management decisions on public lands through a planning process that includes participation by the public and Federal, State and local governments; use of the best available data; and analysis of alternatives. Resource management plans are designed to guide and control management actions relating to the increasingly competitive demands for public land, while at the same time protecting and ensuring their long-term productivity.

Sixty-five resource management plans had been approved by the end of FY 1990. An additional seven plans were in final form and awaiting State Director approval. Twenty-nine more were under way. With 65 plans completed, the BLM is placing increased emphasis on plan implementation, monitoring, and maintenance.

Areas of Critical Environmental Concern

FLPMA requires that the BLM give priority to the designation and protection of Areas of Critical Environmental Concern (ACEC). Such areas are designated to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources; or other natural systems or processes; or to identify natural hazards. Natural areas may also be designated under FLPMA to maintain natural diversity and provide for scientific research.

ACEC's are identified through the BLM's planning process. Appropriate management actions for each area are developed and tailored to reflect site-specific resources and local circum-

stances. Protection of the identified values is ensured whenever subsequent uses are undertaken or authorized.

During FY 1990, eight ACEC's were designated. This raised the amount of public lands accorded this designation to more than 6.9 million acres and reflected BLM's vigorous commitment to the appropriate use of this designation and management authority.

FIRE MANAGEMENT

One of the major accomplishments of 1990 was the completion of the BLM District and State fire management plans. The planning process was initiated at OMB's request in 1985. The plans were derived from existing land use plans and were designed to provide the most efficient fire management program to meet management objectives. The national plan will be developed in 1991 as a result of this effort and will guide the fire program and budget submission through the mid-1990's.

As a further result of the 1988 review, the BLM has been cooperating with other Department of the Interior agencies in identifying critical fire management research needs. Funding needs have been identified for these projects and an implementation plan is being developed.

Fire has always been a natural part of the environment. This is particularly true for the lands managed by the BLM. The BLM recognizes fire in our environment as either wildfires that cause negative impacts and must be suppressed, or prescribed fires that achieve positive environmental results.

The BLM's prescribed fire program was again active, with the prime beneficiaries being forestry, wildlife and range. During FY 1990, there were 750 prescribed fire projects with a total burn acreage of 52,127.

The BLM fire program experienced a lighter than normal fire season, outside Alaska. The number of fires occurring on BLM-administered lands was 2,262, with 1,018,480 resultant acres burned.

This compares with the 1983 - 1989 average of 1,828 fires and 558,896 acres burned. Of the 1990 totals, Alaska accounted for 142 fires and 795,789 acres.

The Boise Interagency Fire Center (BIFC), for which the BLM is the host agency, experienced an increase over the previous season in support requests. The National Interagency Coordination Center (NICC) at BIFC responded to support requests from 784 fires, compared to 688 in 1989, still well below the record 1,700 in 1988. The total number of fires reported to BIFC for all agencies was 66,481 with 4,621,621 acres burned.

The months of June, July and August provided the majority of the fire activity. In June, the Southwest Area and to a lesser degree the Rocky Mountain Area experienced high fire activity and in some cases severe erratic fire behavior. In late June, California experienced extreme fire behavior on several fires due to extremely dry conditions and high winds.

In July, Alaska experienced a rapid buildup of fire activity due to an extended period of below normal precipitation followed by dry lightning.

In August, dry lightning sparked a number of fires in northern and central California, Oregon, Washington and the Great Basin. During that month, almost 15,000 fires were reported to NICC, over 2 1/2 times the average for the month. Due to

Firefighters relax after a long shift.

Arizona's Havasu Resource Area firefighters Dan Mapstone and Chad Robinson load hose packs from Ron Warren in preparation for wildland fire suppression.

the high demand for resources, four battalions of military personnel were trained and three activated, two in Oregon and one in Northern California. August was followed by a typical light to moderate fall season.

LAW ENFORCEMENT AND RESOURCE PROTECTION

The BLM's law enforcement and resource protection program began in 1976 with the passage of FLPMA. That Act directs the BLM to enforce laws and regulations relating to the public lands and its resources and to protect the lives and safety of the people who use the public lands.

In addition to FLPMA, the BLM enforces provisions of other laws including the Archaeological Resource Protection Act (ARPA), the Wild Horse and Burro Act, the Wilderness Act, and the Wild and Scenic Rivers Act.

The Bureau employs special agents and law enforcement rangers to enforce the laws on the public lands. In addition to their formal education, all law enforcement personnel hired by the BLM are required to complete intensive law enforcement training courses at the Federal Law Enforcement Training Center in Glynco, Georgia.

The BLM's special agents, or criminal investigators, deal with serious crimes on the public lands. Special agents investigate criminal law violations using such techniques as surveillance, undercover work, and electronic monitoring.

The BLM's rangers are the uniformed law enforcement presence on the public lands. Enforcing laws applicable on public lands, and apprehending those who violate the laws, are the main focus of a ranger's job.

During FY 1990, BLM special agents and law enforcement rangers continued efforts with other Federal, State and local agencies to eradicate illegal drugs from public land in California, Oregon and other Western States. The BLM also increased its efforts to enforce ARPA by emphasizing the investigation of destruction, theft, and sale of archaeological artifacts.

HAZARDOUS MATERIALS

The Hazardous Materials Management Program's goals are the protection of public health, safety and the environment; ensuring compliance with applicable laws and the control of Federal liability.

The program is based on the requirement for compliance with the Resource Conservation and Recovery Act, as amended, which requires treatment, storage and disposal of hazardous wastes; the Comprehensive Environmental Response, Compensation and Liability Act, as amended, which regulates cleanup of spills and abandoned waste sites; and other Federal and State laws that regulate the management of hazardous materials.

During FY 1990, program activities for hazardous materials management expanded in all BLM State Offices. Field officials were involved in 87 emergency hazardous substance cleanups on the BLM public lands.

Significant accomplishments for the year included expanding inventories to identify or confirm the presence of hazardous materials on public lands. A total of 85 compliance audits

were conducted at landfills on public lands. The BLM also completed 64 preliminary assessments and site inspections in FY 1990; conducted six expanded site investigations in Arizona, California and New Mexico; and continued the Remedial Investigation/Feasibility Study contract in New Mexico.

The National Academy of Engineers continued to evaluate the BLM program in FY 1990. The BLM formed partnerships with regulatory agencies to identify and conduct appropriate levels of risk assessments at potential hazard sites on public lands and provide technical support to other programs in compliance with hazardous materials laws and liability control. The BLM also worked in partnership with industries to effect cleanups of sites in several areas in FY 1990.

It should be noted that the BLM's potential liability for nearly all hazardous materials sites derives from private, or State or local government uses of public land. The BLM is seldom either a generator or transporter of hazardous substances or a hazardous waste facility operator. In some cases, primarily mining sites, the BLM will be an "innocent landowner" for abandoned sites because, by law, the EPA cannot spend Superfund monies to clean up sites on Federal lands. This limitation of EPA makes it imperative for the BLM to find financially viable responsible parties to clean up the problems that those parties created.

In FY 1990, the program supported two major new initiatives. The first was an agreement with the Bureau of Mines to test state-of-the-art, through-the-earth geophysical and geochemical technologies for determining the risk in closed landfills. The second initiative was a major expansion of the BLM's training activities in hazardous materials management designed to improve understanding of environmental laws and improve the technical capability of field officers to respond to these laws.

CADASTRAL SURVEY

Under 43 USC 2, BLM's Cadastral Surveying Division has the ultimate responsibility for all Federal surveying. Its work therefore extends beyond the survey and resurvey of public lands, authority for which goes back to the Land Ordinance of 1785. With perfecting changes, its rectangular principles were enacted into law under the Constitution in the Public Lands Act of 1796 and have been carried forward to 43 USC 751. Consequently, there is a nationwide dimension to BLM cadastral surveying. Its crews are in the field from Florida to Maine, from Maine to California, and from California to Alaska. BLM's cadastral surveyors continue to introduce changes in their ancient art to take advantage of emerging technology.

The BLM maintains all official Public Land Survey System records covering 30 States. Because private surveyors are constantly making resurveys and subdivisional surveys, these records are in steady demand as the basis for the new surveying, even in States which have long since ceased to be public lands States.

Field and Office Accomplishments

A new method of accounting for accomplishments was instituted this year. Under this method, field accomplishments refer to the actual miles run in the field during the year and office accomplishments refer to those miles and acres that were officially accepted on survey plats.

Field accomplishments during Fiscal Year 1990 included 834 miles of original surveys in Alaska and 163 miles of original surveys in the lowerStates; 5,988 miles of resurvey in the Lower States; 1,278 miles of special surveys in Alaska and 703 miles of special surveys in Oklahoma. There were 4,119 survey monuments set in Alaska and 10,320 survey monuments set in the Lower States.

Office accomplishments included 952,544 acres of original surveys in Alaska and 28,210 acres of original surveys in the Lower States; 919,298 acres of resurveys in the Lower States and 54,485 acres of special surveys in Alaska. There were 4,588 miles surveyed/resurveyed in Alaska and 6,609 miles surveyed/resurveyed in the Lower States.

There were 684 field survey plats and 93 supplemental plats accepted in Alaska; and 426 field survey plats and 72 supplemental plats accepted in the Lower States. There were 4 protraction diagrams accepted in the Lower States. A total of 197 lode claims, 101 placer claims, and 78 millsites were accepted.

Native American Indian Lands

The BLM surveys Native American Indian lands under its authority in 25 USC 176. Fiscal year 1990 was a watershed year in the BLM's reimbursable cadastral survey program for the BIA. Congress provided a $420,000 add-on for cadastral surveys of the Arkansas River bed owned by the Cherokee, Chickasaw, and Choctaw Tribes of Oklahoma. This boosted the total funding for the Arkansas River Project Office to $520,000.

It also increased the overall BIA funding to $2.193 million. More than half of that is directed to project offices on Native American Indian lands. Project offices are established for a minimum of three years, and are staffed by permanently assigned BLM surveyors. Thus, travel and per diem expenses are not incurred. These savings allow more miles to be surveyed within a given budget.

Other cadastral survey project offices on Native American Indian lands are located at Window Rock, Arizona (Navajo Nation); White Earth, Minnesota (White Earth Band of Chippewa); Ignacio, Colorado (Southern Ute Tribe); and Hoquiam,Washington (Quinault Tribe and other tribes on the Olympic Peninsula). These project offices are supported by the tribes through resolutions passed by the Tribal Governments.

VOLUNTEERS AND OTHER CONTRIBUTED SERVICES

Volunteer services, as authorized by the FLPMA, continued to steadily increase during FY 1990, with a 2 percent growth over FY 1989.

Volunteers serve the BLM in diverse ways. They improve habitat for fish and wildlife; assist recreational visitors to the public lands by serving as trail and river guides; build or maintain trails and campgrounds; improve range and forestland by planting trees and other vegetation; conserve soil and water resources by improving water sheds; perform mapping, research and other tasks to support mineral and energy planning and development; and assist with administrative support by operating computers and other office equipment.

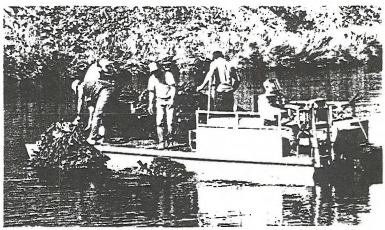
FY 1990 volunteer statistics include the following:

- Volunteers contributed 786,779 hours of work, 22 percent more than in FY 1989.
- Contributed services were valued by the BLM's field managers at more than $8.4 million, 29 percent more than in FY 1989.
- Associated costs to the government were estimated at $685,185 indicating a benefit-to-cost relationship of 12 to 1.
- Each volunteer worked an average of 54 hours; 1 out of 3 were females; 7 percent were more than 60 years old; 60 percent were between 18 and 59 years of age; and 33 percent were under 18 years of age.

Hosted Workers

The BLM also recruits "hosted workers" or people who work for the BLM and are paid wages by another entity. One example of such a program is the Senior Community Service Employment Program, a Federal-State program through which low-income older persons can work for public or community service organizations and be trained on the job while paid minimum wage.

In FY 1990, the BLM's field managers were assisted by 2,281 hosted workers, who served 527,016 hours and accomplished work valued at $5.6 million. Incidental costs to the BLM were estimated at $457,177.



In Arizona, local volunteers from the Bassmasters Club and Desert U.S. Bass Anglers teamed up with the Yuma Resource Area to drop Christmas trees into backwaters of the lower Colorado River to improve fish habitat.

INFORMATION RESOURCES MANAGEMENT

The BLM's Information Resources Management (IRM) includes data administration, records administration, mapping sciences administration, information resource planning and policy, automated data processing (ADP), telecommunications, and information security. The program continues to develop policies, standards and procedures for managing data, spatial data records, and technological tools to assist the management of the BLM's information resources and to improve public land resource management.

Intensive work on the Automated Land and Mineral Record System (ALMRS) Modernization Project continues, as the BLM's field offices focus their efforts to standardize data, services, and information technology operations to implement the ALMRS/Modernization Project in FY 1994 and FY 1995.

Over 5,000 microcomputers bureau-wide are supporting the BLM's evolving local automation requirements. The need for applying graphics capabilities for processing spatial data continues to increase.

Information access, information security, cost recovery, and electronic records management are a critical part of the BLM's IRM program. With the passage of the Federal Computer Security Act of 1987, the BLM began developing a comprehensive Information Security Program. The program includes identification and protection of the BLM's data from unauthorized access and development of security plans for sensitive systems.

Risk analyses for ADP and continuity of operations plans were carried into FY1990 with comprehensive plans being developed for each site. This effort involves extended contingency operations between BLM offices and expanded cooperation with other agencies. This will expedite security planning and ensure that the BLM maintains its automated records using the most secure means possible.

Public Access

BLM policies and procedures on public access issues were developed during FY 1990. Specific Records Administration policies were issued on categories of information designated as public and clarifying public access to BLM data and records. These policies also address methods of access under the Freedom of Information Act and through data sharing agreements. The BLM also initiated an ongoing cost recovery project to establish Bureau-wide rates for providing copies of records in both manual and automated formats. These rates were established in October of 1990 and will be revised and updated on an annual basis.

Records Transition

Records transition is a priority project within the BLM. This is the orderly process for transferring manual, paper, microform and other non-automated records to an automated system. The BLM records transition project will create the framework for designing official record status to the automated records, create sufficient documentation to ensure legal admissibility and establish procedures to ensure fair and equitable use by members of the public. When the records transition planning process is approved for bureau-wide application, it will be incorporated with the BLM Records Administration policies. Electronic records guidance development began in FY 1990 and will be integrated with the ADP life cycle management process which includes procedures for creation, use, maintenance, transmission, release, preservation, and disposal of records in all forms.

Data Administration

In FY 1990, the BLM initiated specific Data Administration policies and guidance. These included the application of the BLM Enterprise Data Model and Mid-Level Analysis. The Enterprise Data Model provides management direction to the BLM's data. The BLM also continued work on the establishment of data elements for all of the Resources programs. Other work included the development of Data Administration policies for data integrity, shared data resources, data modeling and BLM's data dictionary. The BLM's data administration policies will be prepared in FY 1991 and evaluated in the following decade.

As part of the BLM's Data Administration strategies, the BLM has been collecting legal land descriptions and legal land status data on land administered by the BLM in the Western States. Using established standards, legal land descriptions were collected in 1990, and legal land status data collection will be completed in early 1992.

Telecommunications

The IRM program will continue providing BLM field offices with improved computer, telecommunications, and records management capability. This will assist "on-the-ground" management and service to the public.

In telecommunications, the BLM has continued to reduce its subscription to consolidated telephone service provided in major metropolitan areas by the General Services Administration in favor of BLM-owned and maintained systems. This will result in savings in the BLM's offices over the next ten years.

Automated Land and Mineral Record System

A basic responsibility for the last 200 years has been the maintenance of the land and mineral records for the public lands. These official documents are the basis, in our American system of property rights, for the legal authorizations to use the public lands, including thousands of applications annually for oil and gas leases and rights-of-way. The the BLM is now automating access to the information on these records, replacing hand-drawn plats and procedures that in some offices date back to the beginning of the country. Implementing the ALMRS Modernization Project is a major effort, and in FY 1990 work continued toward the issuance of a Request for Proposal by FY1991. The BLM also completed a Master Plan for Automation to tie together all of the automation projects.

To prepare key staff for implementing automation, four "Automation for Managers" courses were held in FY 1990. Over 150 BLM employees participated.

Preserving America's Heritage

The Eastern States Office (ESO), considered the largest land title office in the world, houses the original patents and supporting documents for lands that were part of the original "Public Domain" in 1789. These include lands won from the British during the American Revolution (Ohio, Michigan, Indiana, Illinois, and Wisconsin), lands that were part of the Spanish possessions (Alabama, Mississippi, and Florida) and lands that were purchased from France in 1803 (Louisiana, Arkansas, Missouri, Iowa, and Minnesota). Patents (deeds that transfer land ownership from the U.S. Government to a buyer) and tract books (records showing how, when and to whom title to the public domain passed), dating back to 1790, represent the only record system used by the United States to show original grants on these lands.

In FY 1989, ESO entered into an Interagency Agreement with the Department of Energy, Office of Scientific and Technical Information. With their expertise and skilled contractor, Science Applications Corporation, they developed a prototype system to optically scan the General Land Office records, which involves storing information on discs to allow optimum data retrieval and protection of the original documents. The estimated four-year project called "Preserving America's Heritage" has been endorsed by the Commission on the Bicentennial of the US Constitution. ESO has now completed three States.

Texas Acquired Mineral Project

The State of Texas does not have a standard base map, and surveys were done on a metes and bounds system which is much more complex than the rectangular system used in most States. No centralized records were maintained as Federal agencies purchased lands and mineral rights, so it has been difficult to determine the extent of Federal holdings in Texas. Research completed by the BLM has shown around 2.6 million acres of acquired lands, but their location was largely unknown. A program known as the Texas Acquired Mineral Project (TAMP) was begun in 1985 to inventory records to locate Federal estate. That project now includes a cooperative agreement between the BLM and the Texas Railroad Commission (TRRC). Through this agreement, the BLM is supporting a TRRC project to produce computer generated digital

Information Resources Management programs enhance a myrid of BLM's day-to-day operations.

well location maps for certain areas in Texas. In return, the TRRC is providing the BLM with automated base map data for mapping Federal minerals. The BLM is on a production-line basis, producing automated maps of certain Texas counties. Three of the targeted counties have been completed. TAMP has already paid for itself in the amount of money returned to the treasury in mineral royalties, and is assisting the BLM in its efforts to offer Federal oil and gas leases for competitive bid in Texas. One lease held thousands of dollars in an escrow account until the BLM identified the Federal mineral rights and claimed it.

Data Sharing

Coordination efforts are under way with other agencies to enhance data sharing. This will assist with avoiding duplication of efforts and in the development of data standards. The BLM in New Mexico has entered into agreements with McKinley County and Meridian Oil Company to pilot test on-line data access to BLM data. McKinley County is using on-line access to the Farmington Resource Area data base to construct base maps, which are then field checked and supplemented. This data is used to construct accurate "Rural Addressing" information systems needed for emergency services to respond more quickly to calls for help. McKinley County is representative of many counties with heavily fragmented land ownerships patterns. Because collection of taxes, maintenance of roads, law enforcement, etc. are all tied to who owns what parcel of land, cooperation with the BLM is offering the county a relatively inexpensive way to resolve its ownership confusion.

The BLM has been developing Release 1 software for data preparation. This software, when implemented in 1992, will permit Alaska and the Lower 48 States to use common data standards and computer systems for the first time. Costs will be substantially reduced.

MANAGEMENT AND PRODUCTIVITY INITIATIVES

During FY 1990, the BLM continued two approaches to improve the productivity of its programs and employees. The Productivity Pilot Program successfully concluded its 3-year effort in four districts: Susanville, California; Butte, Montana; Roswell, New Mexico; and Rock Springs, Wyoming. These districts, along with the BLM State organization in Montana, will continue to stress productivity through the Total Quality Management (TQM) initiative that is a Department of the Interior priority. TQM, a concept that focuses on participative management and total involvement, is a strategic, integrated management system for achieving customer satisfaction.

Four new projects were funded through the Productivity Enhancement Fund (PEF) program in FY 1990. The PEF program encourages managers to experiment with low-cost, innovative methods and techniques to increase efficiency and effectiveness. The four projects were the microchip wild horse identification in Montana, Red Rock Canyon recreation traffic counters in Nevada, human waste disposal in Oregon, and remote sensing for reforestation surveys, also in Oregon. The funding for these projects was $87,000, with a projected cost savings of $488,000. As of FY 1990, 20 BLM projects have been funded through the PEF program.

TRAINING AND EMPLOYEE DEVELOPMENT

The BLM continues to have the premier training and employee development program in the Department of the Interior. In FY 1990, the BLM devoted approximately $8 million and 100 FTE's to the training effort. In the BLM, training and employee development is a decentralized operation. The major offices are:

- Office of Employee Development, Washington, D.C., headquarters;
- Phoenix Training Center (PTC), Arizona;
- Division of Training at the Boise Interagency Fire Center (BIFC), Idaho;
- Service Center (SC), Colorado;
- An individual training officer in each of the states.

The BLM enhances the careers of its employees by encouraging self development and on-the-job training, as well as formal training in the pursuit of professional and administrative careers. To this end, the BLM has developed a resource guide, called the Career Program, to inform supervisors and employees of the many opportunities that are available, such as:

- New Employee Orientation
- Employee Excellence Seminar
- Director's Career Enhancement Program
- Women's Executive Leadership Program
- Supervisory Training
- Management and Leadership Workshop, Advanced Leadership Workshop
- Senior Executive Service Candidate Development Program

In addition to the Career Program, there are training and employee development programs geared to employees in the beginning and early stages of their careers. These programs are designed to build an understanding of and commitment to the BLM's mission and the employee's role in that mission. Programs focus on identifying and developing both a reserve of technical expertise and a body of high potential future managers and leaders.

The training centers and offices conduct a variety of technical training programs designed to help the BLM more effectively carry out its mission. Typically, these technical programs are delivered in or by the PTC, BIFC, SC and the State training offices.

The Office of Employee Development in Washington coordinates and provides policy guidance and assistance for BLM-operated training programs and officers. The Washington, D.C., office also provides employee development services for the headquarters office.

ADMINISTRATIVE SERVICES

During FY 1990, the BLM spent $113 million for goods and services. This includes approximately $84 million for 2,577 contract actions and $29 million for 62,000 small purchases of $25,000 or less. In addition, the BLM continues to maximize the use of U.S. Government Visa cards for small purchases. BLM employees made purchases of over $2.8 million using over 1,150 cards. This technique reduces paperwork by eliminating the preparation and distribution of purchase orders, permits over-the-counter transactions, and guarantees fast payment.

Procurement

The BLM continues to exceed nearly all of its goals in various socioeconomic procurement programs. The Bureau's proposed procurement automation project, the Automated System for Acquisition Processing (ASAP), has been merged into a Departmentwide procurement automation project known as the Interior Department Electronic Acquisition System (IDEAS). ASAP user and functional requirements developed by the BLM are being used as a baseline for developing Departmentwide requirements to automate all procurement operations, from requisition to close-out, produce necessary reports and interface with financial management and property systems. Upon completion, the system is expected to be used by all agencies and offices within the Department. In the interim, the BLM has competitively procured and successfully implemented a small purchasing and reporting system known as the "Preprinted Forms System" (PPFS) to introduce its procurement personnel to automation until the Departmental procurement system is developed.

Property Management

The BLM continues to operate the Departmental Fleet Management System for the Department, providing management utilization reports to the Department. The warehouse inventory management system for fire warehousing has been developed and is undergoing beta testing this year. The BLM's system for electronic screening and reporting of excess personal property has been expanded to allow other agencies in the Department to use it on a cost reimbursable basis. This system meets a need identified by the Department with minimal cost. The BLM continues to report BLM owned and leased real property holdings to the General Services Administration (GSA) using the automated FIRM system developed by GSA.

Uniforms

The BLM's uniform program, implemented in FY 1988, continues to be analyzed by a National Uniform Committee which is chartered to ensure that the program meets the needs of uniformed employees and promotes a positive image. In FY 1990, BLM employees field tested cotton shirts and trousers, fire retardant shirts and trousers, shorts, polo shirts, and T-shirts. To analyze the success of the program, and the results of the field test, three questionnaires were developed for completion by uniformed employees. The results of the questionnaires, along with input from employees through committee members, will be presented to the National Uniform Committee for determining any changes to the program.

Automated Directives

In FY 1990, the BLM initiated a field test for automated formatting of permanent directives initiated in the Washington Office. The concept originated to reduce the time it takes to properly format a permanent directive as well as trying to reduce the cost of printing, mailing, and storing hard copy directives. The field test was successful and will be implemented in FY 1991, if funds are available.

Implementation of the Printing Study

In May 1989, the Field Committee accepted the recommendations of the Printing Study Team. Two of the recommendations of the study in which the Washington Office was involved were the development of the Publications Standards handbook and the completion of the feasibility analysis for on-demand printing at the Service Center.

The Publications Standards Handbook contains the standards for the design of publications and maps, and the use of the BLM emblem. The Handbook was issued in draft format in September 1990. It will be "field tested" for 18 months. All comments will be evaluated and, if appropriate, incorporated into a final version, and formally

distributed as a part of the directives system. This comprehensive document provides designers with information and formats for creating new publications and maps.

The feasibility study for on-demand printing addressed the costs of the existing system of printing and storing forms and publications, as well as the technology for implementing a low-cost system for printing requested documents. The study focused on producing and storing master documents for future printing and identified an automated system for the creation of forms.

PERSONNEL MANAGEMENT

The BLM's Division of Personnel in the Washington Office concentrated much of its efforts during FY 1990 in developing personnel policies for streamlining personnel services, career development programs and affirmative recruitment and position classification projects.

One major development was the implementation of the BLM Seasonal Employment Referral System which uses State employment offices in lieu of the former centralized internal processing of seasonal applications. The new system resulted in faster processing of applications and a significant savings in administrative costs associated with the hiring of approximately 2,500 seasonal workers each year.

During FY 1990, the BLM employed approximately 10,000 individuals. Special emphasis was placed on recruitment and retention of women and minorities and position classification throughout the BLM. Primary concentration was placed on classification of positions related to the evolving functions in the Land and Information System and modernization efforts.

The BLM places special emphasis on recruitment of qualified people from a diversity of backgrounds.

FINANCIAL MANAGEMENT

FINANCIAL INITIATIVES

The BLM's Division of Finance in the Washington Office, and its operating counterpart at the Denver Service Center, provide accounting and financial management services for all BLM-appropriated funds. This includes one annual and numerous permanent appropriations that provide funds to states and local governments in which Federal land resources are located, either as payments in lieu of taxes, or as shared revenues from the sale, leasing, and disposition of resource commodities. In addition, the BLM is a primary collector of Federal revenues for use of resources on public lands.

Credit Card Program

Financial management's major focus is on improving services through developing, implementing, and operating improved financial management systems. Service to the public was improved during FY 1990 through testing and implementing a credit card payment program which allows the public to pay amounts owed by VISA or Mastercard. During the testing phase of the system, 761 payments totalling $88,196 were accepted. This method of payment provides increased convenience to the public, permits telephone payments, guarantees fast payment to the federal government, and reduces paperwork. The program is now operating permanently with expansion to additional BLM offices.

Federal Financial System

The BLM also completed its initial development of a new administrative accounting and payment system, the Federal Financial System (FFS) during FY 1990. The system is part of a governmentwide Presidential priority to improve and standardize financial systems, operations, and information throughout Federal agencies. Upon completion of the implementation phase, all Department of the Interior agencies are to use the FFS. The BLM will implement the system in FY 1991 to provide a foundation for continuing improvements in financial management.

Revenues and Receipts

The BLM is a primary collector of Federal revenues. Gross receipts from the lease, use, and sale of public land and resources totaled approximately $298.8 million FY 1990. Of this amount, $111.7 million will be returned to the states; $19.3 million was transferred to the Reclamation Fund; $9.7 million was transferred to the Range Improvement Fund; and the remaining $158.1 million went into the general fund of the United States Treasury. Monies appropriated from the Treasury to the BLM for operating expenses totaled $880 million in FY 1990.

The development and use of BLM land and resources generate receipts from a variety of sources. Timber receipts totaled $234.4 million in FY 1990. Receipts generated by other BLM programs, including sales of public land, grazing, right-of-way leases, permits and rentals, and other miscellaneous receipts have remained constant with receipts from past years.

State and Local Shares

The BLM's most direct fiscal impact upon States that include public land is through revenue sharing and other direct payments. In the period from 1976 through 1990, State and local governments received nearly $4.5 billion from the Department of the Interior as their share of revenues collected from the lease or sale of public land resources, and as in-lieu payments for tax-exempt lands.

Revenue Sharing

Revenue sharing payments are authorized by specific statutes, but may be subject to constraints mandated by the Gramm-Rudman, Hollings Balanced Budget and Emergency Deficit Control Act of 1985 (Gramm-Rudman). For fiscal years in which the mandated restraints are in force, payments may be reduced or delayed until the following fiscal year. The amount of any reduction is determined in accordance with a calculation established by Gramm-Rudman. For FY 1990, revenue sharing programs were not affected since there was no Gramm-Rudman sequestration.

Taylor Grazing Act revenues are distributed according to the type of land generating them. Of the fees collected from livestock grazing districts, 12.5 percent are distributed to the State for expenditure by the legislative branch to benefit the counties generating these grazing receipts. Grazing revenues generated on public land outside the grazing districts are shared equally with the State. State legislatures have the authority to expand the funds to benefit the counties where grazing monies are collected.

Land sale revenues generated in Nevada under the Santini-Burton Act are collected and distributed on an annual basis. This Act authorizes the allocation of ten percent of gross revenues back to Clark County or the municipality in which these revenues are generated, and five percent to the State of Nevada. The remaining revenues are deposited in the Land and Water Conservation Fund for the purchase of environmentally sensitive land in the Lake Tahoe Basin.

Payments in Lieu of Taxes

Local government units within Western States are the principal beneficiaries of the 1976 Payments in Lieu of Taxes Act. This law was enacted to provide federal payments to those areas where large portions of land are in Federal ownership and, therefore, are exempt from local property taxes. Serving as a supplement to revenue sharing funds, payments in lieu of taxes are made directly to local governments and may be used for any governmental purpose.

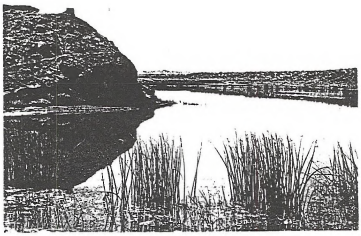
Lands eligible for payments in lieu of taxes are Federally owned lands in the National Forest, National Park , and National Wildlife Refuge Systems; lands administered by the BLM; land dedicated to the use of Federal water resource development; dredge disposal areas under the jurisdiction of the Army Corps of Engineers; inactive and semiactive Army installations; and certain land donated to the United States Government. The Act specifically prohibits payments for land (but not certain donated land) that was tax exempt before being acquired from State or local government.

Since payments in lieu of taxes started in 1977, more than $1 billion has been paid to local governments; about $103 million of that amount was paid in FY 1990.

Federally-owned lands are eligible for payments in lieu of taxes. This riparian-area is managed by the BLM.

APPROPRIATIONS AND EXPENDITURES

BLM programs are funded through six major operating appropriations, several permanent and trust appropriations, and reimbursements from other Federal agencies for work performed on their behalf. In addition, the BLM budget includes one annual appropriation and numerous permanent appropriations that provide funds to State and local governments in which Federal lands and resources are located either as payments in-lieu of taxes or as shared revenues from the sale, leasing and disposition of resource commodities.



BLM FUNDING

The BLM's overall funding for the most recent five Fiscal Years (FY) is as follows:

BLM FUNDING-FY 1987-1991

	FY 1987 Actual	*FY 1988 Actual*	*FY 1989 Actual*	*FY 1990 Actual* [1]	*FY 1991 Enacted*
			(In Millions of Dollars)		
BLM Operating Appropriations	562.9	578.3	632.1	725.9	722.9
Payments-in-Lieu of Taxes	105.0	105.0	105.0	105.0	104.5
Permanent Payments to States	81.4	156.4	127.0	120.8	110.2
Other Miscellaneous	5.9	7.3	7.5	169.6 [2]	18.2
Total	**$ 755.2**	**847.0**	**871.6**	**1,121.4**	**955.8**

(1) The FY 1990 and FY 1991 Operating Appropriations amounts include only BLM's firefighting program.

(2) The FY 1990 Other Miscellaneous category includes $150.8 million appropriated as permanent budget authority for the Cook Inlet Region, Inc. (CIRI), Property Account, established to settle CIRI's land entitlement issues in Alaska. BLM is responsible for monitoring and administering this account.

FUNDING, OBLIGATIONS AND WORK-YEARS BY PROGRAM - FY 1989-1991

Enacted appropriations, actual obligations and work-year data on a program-by-program basis for BLM's principal operating accounts for 1989 and 1990 actual, and 1991 enacted to date are as follows:

Management of Lands and Resources (MLR)

PROGRAM		FY 1989 *Actual*	FY 1990 *Actual* (1)	FY 1991 *Enacted* (2)
Energy and Minerals (includes Oil & Gas, Coal, Mining Law Administration, etc.)				
Appropriation	($000's)	74,297	70,441	74,453
Obligations	($000's)	74,293	69,828	N.A.
Work Years		1,681	1,479	N.A.
Lands, Realty and Rights-of-Way				
Appropriation	($000's)	36,729	36,067	39,368
Obligations	($000's)	36,724	35,782	N.A.
Work Years		839	757	N.A.
Forest Management (except Western Oregon)				
Appropriation	($000's)	6,685	6,581	7,003
Obligations	($000's)	6,683	6,450	N.A.
Work Years		138	127	N.A.
Wild Horse and Burro Management				
Appropriation	($000's)	14,560	13,408	14,161
Obligations	($000's)	14,319	13,335	N.A.
Work Years		156	152	N.A.
Rangeland Management				
Appropriation	($000's)	34,600	35,296	40,114
Obligations	($000's)	34,592	34,935	N.A.
Work Years		793	731	N.A.
Soil, Water and Air Management				
Appropriation	($000's)	14,741	14,935	17,809
Obligations	($000's)	14,467	14,697	N.A.
Work Years		253	244	N.A.
Wildlife Habitat & Fisheries Management				
Appropriation	($000's)	19,985	22,607	31,114
Obligations	($000's)	19,986	22,486	N.A.
Work Years		375	395	N.A

FUNDING, OBLIGATIONS AND WORK YEARS BY PROGRAM FY 1989 - 1991

Management of Lands and Resources *(continued)*

PROGRAM		FY 1989 *Actual*	FY 1990 *Actual* (1)	FY 1991 *Enacted* (2)
Recreation Management (includes Recreation, Cultural, & Wilderness Resource Management)				
Appropriation	($000's)	24,160	28,348	39,197
Obligations	($000's)	24,645	27,539	N.A.
Work Years		508	541	N.A.
Resource Management Planning				
Appropriation	($000's)	9,289	8,872	9,451
Obligations	($000's)	9,283	8,665	N.A.
Work Years		179	159	N.A.
Information & Resource Data Management (includes Information Systems Operation & Maintenance, ALMRS, & Resource Data Acquisition)				
Appropriation	($000's)	43,060	43,423	43,015
Obligations	($000's)	37,231	44,351	N.A.
Work Years		541	620	N.A.
Resource Protection & Maintenance (includes Facilities Maintenance, Cadastral Surveys, Resource Protection/Law Enforcement, & Hazardous Materials Mgmt.)				
Appropriation	($000's)	59,819	66,210	84,378
Obligations	($000's)	59,296	64,413	N.A.
Work Years		924	803	N.A.
General Administration				
Appropriation	($000's)	87,649	89,726	97,428
Obligations	($000's)	87,635	89,121	N.A.
Work Years		1,089	1,046	N.A.
Emergency Operations(3) (includes Grasshopper and Mormon Cricket Control, & Emergency Damage Repair)				
Appropriation	($000's)	501	N.A.	N.A.
Obligations	($000's)	820	N.A.	N.A.
Work Years		4	4	N.A.
MANAGEMENT OF LANDS AND RESOURCES - TOTALS				
Appropriation	**($000's)**	**426,075**	**435,914**	**497,491**
Obligations	**($000's)**	**419,974**	**431,602**	**N.A.**
Work Years		**7,480**	**7,058**	**N.A.**

(1) FY 1990 Actual column reflects reductions resulting from sequestration under the Deficit Control Act (Gramm-Rudman).

(2) FY 1991 Enacted Appropriation includes a 0.524 percent reduction for each activity which was mandated by the FY 1991 Interior and Related Agencies Appropriations Act (P.L.\101-512).

FUNDING, OBLIGATIONS AND WORK YEARS BY PROGRAM FY 1989 - 1991
Oregon and California Grant Lands (O&C)

PROGRAM		*FY 1989 Actual*	*FY 1990 Actual* [1]	*FY1991 Enacted* [2]
Western Oregon Resources Mgmt. (includes Forest Mgmt. & Reforestation/ Development & Other Resource Mgmt.) [3]				
Appropriation	($000's)	55,270	88,323	74,392
Obligations	($000's)	55,169	74,984	N.A.
Work Years		936	1,084	N.A.
Western Oregon Information and Resource Data Systems				
Appropriation	($000's)	625	1,554	2,470
Obligations	($000's)	622	1,536	N.A.
Work Years		10	7	N.A.
Western Oregon Facilities Maintenance				
Appropriation	($000's)	3,655	3,716	6,265
Obligations	($000's)	3,499	3,576	N.A.
Work Years		58	61	N.A.
Western Oregon Construction & Acquisition				
Appropriation	($000's)	450	447	906
Obligations	($000's)	411	582	N.A.
Work Years		9	7	N.A.
OREGON AND CALIFORNIA GRANT LANDS - TOTALS				
Appropriation	**($000's)**	**60,000**	**94,040** [3]	**84,033**
Obligations	**($000's)**	**59,701**	**80,678**	**N.A.**
Work Years		**1,013**	**1,159**	**N.A.**

(1) FY 1990 Actual column reflects reductions resulting from sequestration under the Deficit Control Act (Gramm-Rudman).

(2) FY 1991 Enacted Appropriation includes a 0.524% reduction for each activity which was mandated by the FY 1991 Interior and Related Agencies Appropriations Act (P.L.\101-512).

(3) The FY 1990 appropriation level for *Western Oregon Resources Management* includes a one-time appropriation of $30,093,000 in excess receipts.

FUNDING, OBLIGATIONS AND WORK YEARS BY PROGRAM FY 1989 - 1991
Firefighting - (BLM Only)

PROGRAM		FY 1989 *Actual*	FY 1990 *Actual* [1]	FY 1991 *Enacted* [2]
Fire Management and Presuppression[3]				
Appropriation	($000's)	42,623	51,698	52,965
Obligations	($000's)	42,571	47,682	N.A.
Work Years		145	777	N.A.
Emergency Operations[3]				
Appropriation	($000's)	69,214	116,435	47,317
Obligations	($000's)	87,363	106,923	N.A.
Work Years		926	314	N.A.
BLM FIREFIGHTING - TOTALS				
Appropriation	**($000's)**	**111,837**	**168,133**	**100,282**
Obligations	**($000's)**	**129,934**	**154,605**	**N.A.**
Work Years		**1,071**	**1,091**	**N.A.**

FUNDING, OBLIGATIONS AND WORK YEARS BY PROGRAM FY 1989 - 1991
Summary of Department - Wide Firefighting
(including BLM, NPS, FWS, and BIA)[4]

PROGRAM		FY 1989 *Actual*	FY 1990 *Actual* (1)	FY 1991 *Enacted* (2)
Fire Management and Presuppression				
Appropriation	($000's)	N.A.	98,921	101,035
Obligations	($000's)	N.A.	90,179	N.A.
Work Years		N.A.	1,437	N.A.
Emergency Operations				
Appropriation	($000's)	N.A.	166,521	66,845
Obligations	($000's)	N.A.	147,536	N.A.
Work Years		N.A.	525	N.A.
Repayment of Prior Year Firefighting Costs[5]				
Appropriation	($000's)	N.A.	221,046	N.A.
DEPARTMENT-WIDE FIREFIGHTING - TOTALS				
Appropriation	($000's)	N.A.	486,488	167,880
Obligations	($000's)	N.A.	237,715	N.A.
Work Years		N.A.	1,962	N.A.

(1) FY 1990 Actual column reflects reductions resulting from sequestration under the Deficit Control Act (Gramm-Rudman).

(2) FY 1991 Enacted Appropriation includes a 0.524 percent reduction for each activity which was mandated by the FY 1991 Interior and Related Agencies Appropriations Act (P.L. 101-512).

(3) In FY 1990, a separate account was established to fund the operation of the Interior Department's entire fire program. The account provides funding for the BLM, the National Park Service, the Fish and Wildlife Service, and the Bureau of Indian Affairs. This account is administered by the BLM. FY1989 appropriations and obligations are shown here for comparability.

(4) In FY 1990, a separate appropriation account was established to fund the operation of the Interior Department's entire fire program. The account provides funding for the BLM, the National Park Service, the Fish and Wildlife Service, and the Bureau of Indian Affairs. This account is administered by the BLM. Prior to FY 1990, fire was included under the Emergency Operations program within the Management of Lands and Resources account.

(5) The FY 1990 appropriation included $221,046,000 to repay funds which were borrowed from other Interior accounts to cover FY 1989 firefighting costs.

SUMMARY OF PAYMENTS IN LIEU OF TAXES BY STATE

Payment	FY 1990
Alabama	$116,592
Alaska	5,376,108
Arizona	8,050,056
Arkansas	1,250,576
California	10,601,732
Colorado	6,787,415
Connecticut	17,644
Delaware	4,627
Dist. of Columbia	5,207
Florida	1,194,247
Georgia	736,352
Hawaii	36,263
Idaho	7,398,186
Illinois	290,750
Indiana	172,164
Iowa	127,538
Kansas	338,207
Kentucky	596,529
Louisiana	150,941
Maine	85,923
Maryland	39,545
Massachusetts	47,155
Michigan	1,463,667
Minnesota	994,114
Mississippi	402,954
Missouri	1,009,926
Montana	7,989,406
Nebraska	336,096
Nevada	6,356,215
New Hampshire	255,533
New Jersey	38,009
New Mexico	10,498,820
New York	40,954
North Carolina	1,291,779
North Dakota	566,426
Ohio	182,809
Oklahoma	753,939
Oregon	2,925,062
Pennsylvania	215,900
South Carolina	130,466
South Dakota	1,550,923
Tennessee	509,159
Texas	1,276,819
Utah	9,126,282
Vermont	234,698
Virginia	1,232,296
Washington	1,409,393
West Virginia	929,751
Wisconsin	620,598
Wyoming	6,975,204
Guam	2,045
Puerto Rico	6,943
Virgin Islands	11,429
Total	**$102,761,372**

BUREAU OF LAND MANAGEMENT RECEIPTS

	FY 1990 Actual	*FY 1991 Estimated*
Mineral Leases and Permits	2,608,110[1]	$ 3,000,000
Sales of Public Lands & Materials (Includes Burton-Santini Act sales in Nevada)	21,611,292	14,000,000
Fees and Commissions	2,010,595	2,000,000
Sales of Public Timber	19,152,253	20,000,000
Oregon and California Grant Land (Timber Sales)	206,457,228	120,000,000
Coos Bay Wagon Road Lands (Timber Sales)	8,800,868	3,500,000
Grazing Fees	18,144,071	17,500,000
Rights-of-Way Rentals	3,713,989	4,000,000
Rent of Land	528,054	550,000
Miscellaneous Leases and Permits	1,219,002	1,500,000
Nonoperating Revenue[2]	13,615,161	14,000,000
Other[3]	1,000,005	1,000,000
TOTALS	**$298,860,628**	**$201,050,000**

(1) Only reflects receipts collected for the rental of oil and gas pipeline rights-of-way, Natural Petroleum Reserve revenues, and miscellaneous mineral revenues administered by the Bureau Land Management.

(2) Incidental receipts from fines, taxes, etc., that are unrelated to routine public land administration.

(3) Receipts from Special Recreation Use Fees.

ALLOCATION OF PUBLIC LANDS RECEIPTS

	FY 1990 Actual	*FY 1991 Estimated*
States and Counties	111,699,161	112,000,000
Reclamation Fund 1	19,305,638	20,000,000
Range Improvement Fund	9,656,833	10,000,000
Indian Trust Fund 1	16,980	17,000
General Fund	158,182,016	160,000,000
TOTALS	**$298,860,628**	**$302,017,000**

Payment of BLM Receipts to States as of September 30, 1990

States	Mineral Leases and Permits[1]	Forage Receipts Outside Taylor Grazing Districts	Forage Receipts Inside Taylor Grazing Districts	Sale of Public Land and Timber	Other	Total
Alabama	0	0	0	86	0	86
Alaska	596,282	0	0	12,291	0	608,573
Arizona	11,809	212,002	150,993	17,931	0	392,735
California	22,631	245,870	34,405	270,499	0	573,405
Colorado	28,981	89,639	186,649	22,295	0	327,564
Florida	0	0	0	389	0	389
Idaho	0	59,375	452,773	46,876	0	559,024
Kansas	0	100	0	0	0	100
Louisiana	0	0	0	310	0	310
Michigan	0	0	0	10	0	10
Minnesota	0	0	0	163	0	163
Mississippi	0	0	0	72	0	72
Missouri	0	0	0	102	0	102
Montana	7,181	269,492	300,039	47,995	489,184	1,113,891
Nebraska	0	1,432	0	263	0	1,695
Nevada	701	56,186	758,302	898,982[2]	0	1,714,171
New Mexico	308,975	397,168	582,009	45,499	13,945	1,347,596
North Dakota	460	15,718	0	116	2	16,296
Oklahoma	6,976[3]	242	0	380	0	7,598
Oregon	1,146	87,889	386,266	1,138,308	204,540,143[4]	206,153,752
South Dakota	0	148,451	0	1,488	0	149,939
Utah	26,125	0	370,256	32,410	0	428,791
Washington	0	44,536	0	14,421	0	58,957
Wisconsin	0	0	0	290	0	290
Wyoming	86,079	809,265	414,263	39,403	0	1,349,010
Totals	**$1,097,346**	**$2,437,365**	**$3,635,955**	**$2,590,579**	**$205,043,274**	**$214,804,519**

[1] The BLM continues to make payments on receipts from the National Petroleum Reserve, Alaska and other minor categories of mineral receipts even though Minerals Management Service has primary responsibility for mineral receipts collection.

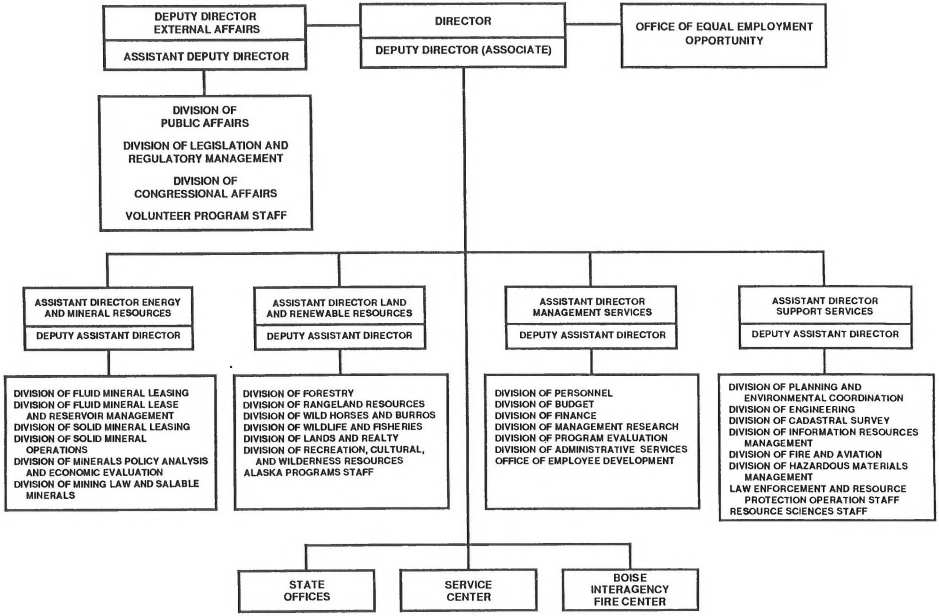
[2] Includes $418,043 for Burton-Santini land sales

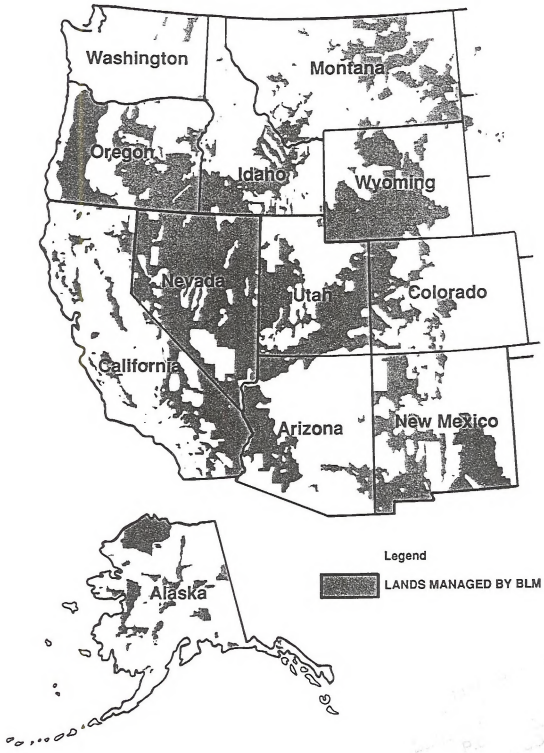
[3] Includes $6,920 for Oklahoma Royalties

[4] Includes $203.7 million from O&C Grant Lands and $828,958 from Coos Bay Wagon Road timber receipts.

ACEC	Areas of Critical Environmental Concern
ADP	Automated Data Processing
ALMRS	Automated Land and Mineral Record System
ANGTS	Alaska Natural Gas Transportation System
APHIS	Animal and Plant Health Inspection Service
ARPA	Archaeological Resources Protection Act of 1979
ASAP	Automated System for Acquisition Processing
AUM	Animal Unit Month
BIA	Bureau of Indian Affairs
BIFC	Boise Interagency Fire Center
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESO	Eastern States Office
ESP	Experimental Stewardship Program
FFS	Federal Financial System
FLPMA	Federal Land Policy and Management Act
FTE	Full-time equivalency
FWS	Fish and Wildlife Service
FY	Fiscal Year
GAO	General Accounting Office
GCRP	Global Change Research Program
GSA	General Services Administration
HCA	Habitat Conservation Area
I&E	Inspection and Enforcement
IDEAS	Interior Department Electronic Acquisition System
IRM	Information Resources Management
ISC	Interagency Scientific Committee
LMU	Logical Mining Units
LWCF	Land and Water Conservation Fund
MLR	Management of Lands and Resources
MMS	Minerals Management Service
MOU	Memorandum of Understanding
MW	Megawatts
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NICC	National Interagency Coordination Center
NPS	National Park Service
OHV	Off-Highway Vehicle
OMB	Office of Management and Budget
PEF	Productivity Enhancement Fund
PPFS	Preprinted Forms System
PRLA	Preference Right Lease Applications
PTC	Phoenix Training Center
PV	Production Verification
R&PP	Recreation and public purposes
RMP	Resource Management Plan
ROW's	Rights-of-way
SC	Service Center
SMAT	Solid Minerals Assistance Teams
TAMP	Texas Acquired Mineral Project
TAPS	Trans-Alaska Pipeline System
TQM	Total Quality Management
TRRC	Texas Railroad Commission
WSA	Wilderness Study Area

BUREAU OF LAND MANAGEMENT



Public Lands Administered by the Bureau of Land Management

PUBLIC LANDS IN THE WESTERN STATES